

# THE IRON AGE

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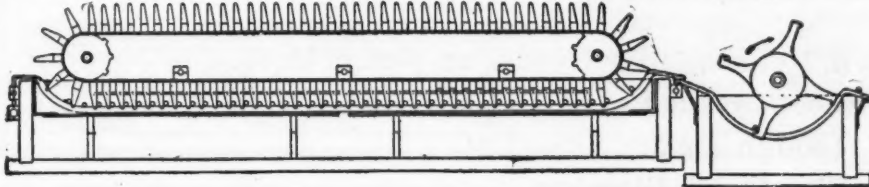
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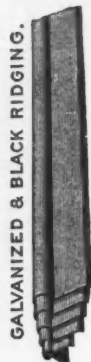
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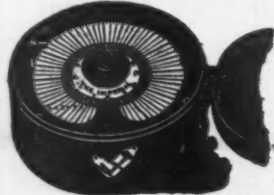
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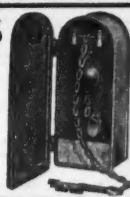
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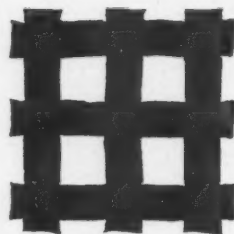
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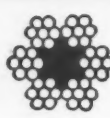
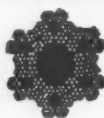
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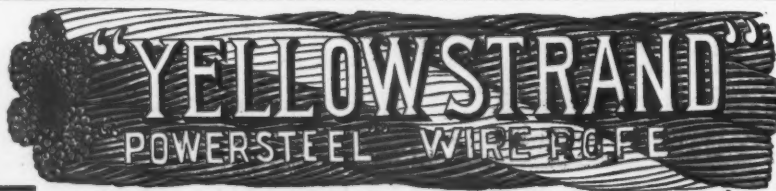
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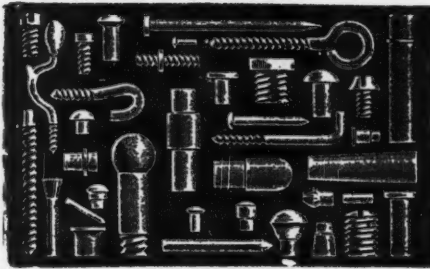
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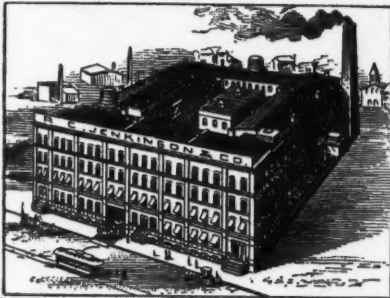
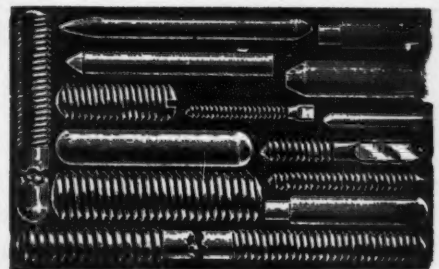


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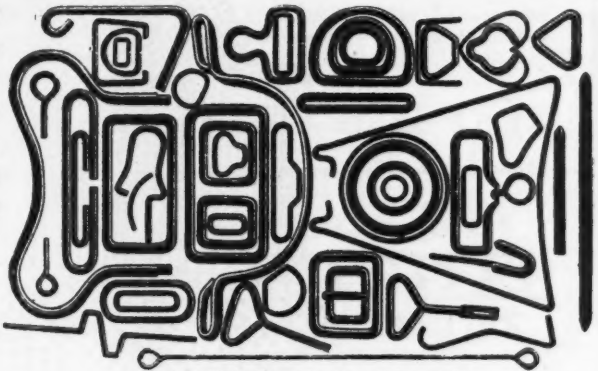
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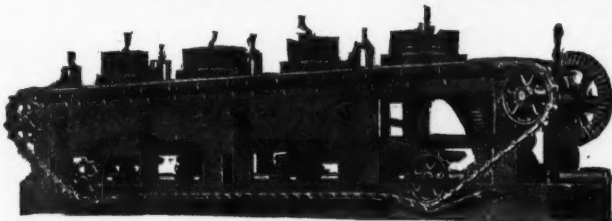
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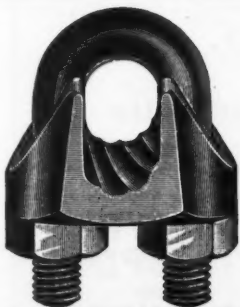
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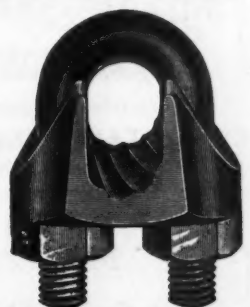


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This seems a particularly opportune time to call the attention of all those interested in galvanizing processes to the perfection to which the Hanson & Van Winkle Company has brought this art, and to the fact that their salts and processes have now been authoritatively declared to be free and clear of infringement on this patent, which had heretofore been asserted to be all controlling. *Whatever may be said of its validity as against others*, as against the salts and processes of this company, the patent is of no effect.

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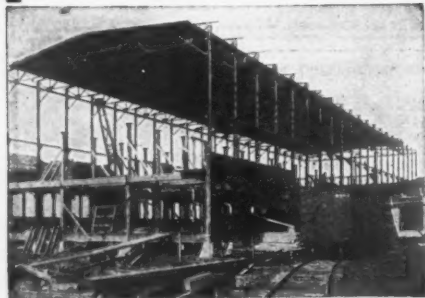
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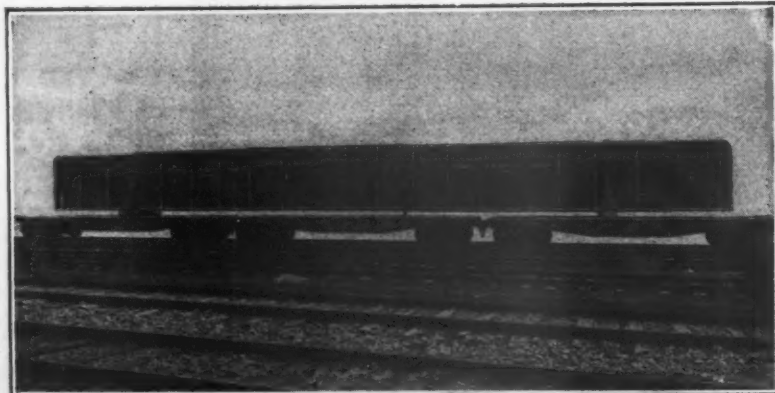
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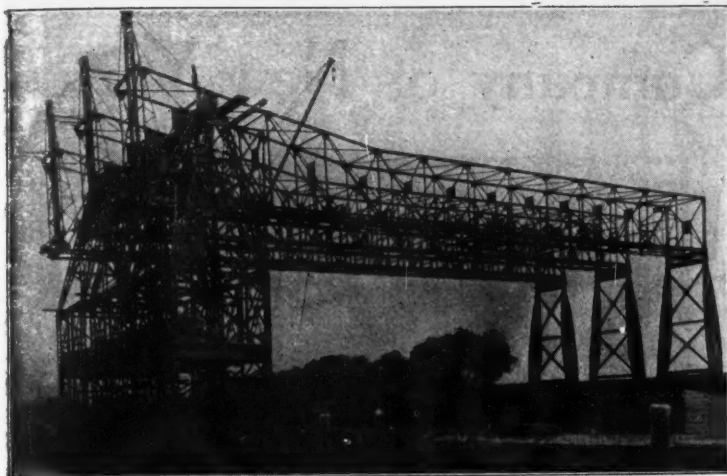
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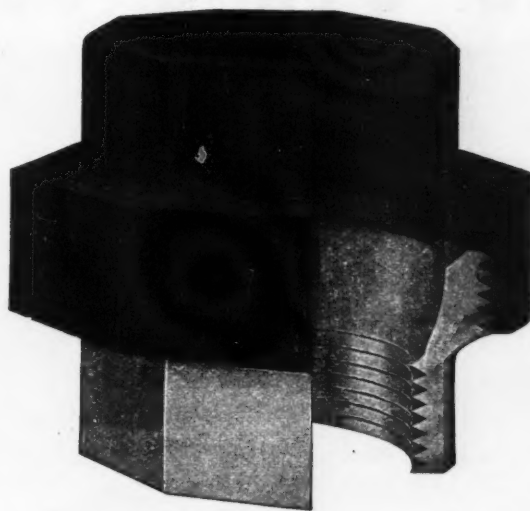
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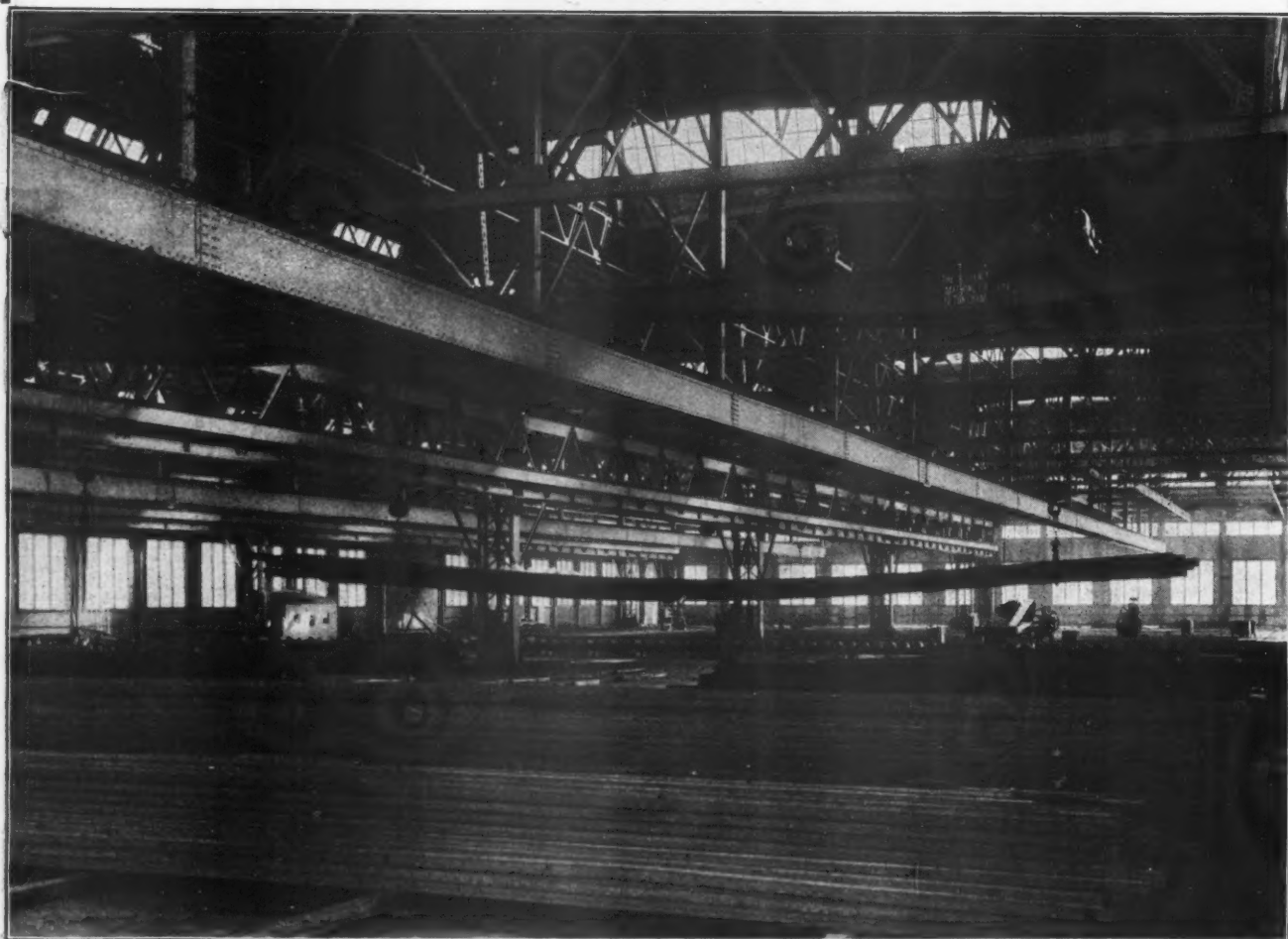
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 1" x 1" x 1/8"  
 1 1/2" x 1 1/2" x 3/16"  
 1 1/2" x 1 1/2" x 1/2"  
 1 1/2" x 1 1/2" x 3/8"  
 1 1/2" x 1 1/2" x 1/2"  
 2" x 1 1/2" x 3/16"  
 2" x 2" x 3/16"  
 2 1/2" x 2 1/2" x 1/4"  
 2 1/2" x 2 1/2" x 3/16"  
 2 1/2" x 2 1/2" x 1/2"  
 3" x 2 1/2" x 3/16"  
 3" x 3" x 1/4"  
 3" x 3" x 5/16"  
 3 1/2" x 2 1/2" x 1/4"  
 3 1/2" x 3" x 1/4"  
 3 1/2" x 3" x 5/16"  
 4" x 3" x 1/4"  
 4" x 3" x 5/16"  
 4" x 4" x 1/4"  
 4" x 4" x 5/16"  
 5" x 3 1/2" x 1/4"  
 5" x 3 1/2" x 5/16"  
 5" x 5" x 1/4"  
 6" x 4 1/2" x 1/4"  
 6" x 4 1/2" x 5/16"  
 6" x 6" x 1/4"  
 8" x 6" x 1/4"

### BEAMS

3"—5 1/2 lb. 7 1/2 lb.  
 4"—7 1/2 lb. 10 1/2 lb.  
 5"—9 1/2 lb. 12 1/2 lb. 14 1/2 lb.  
 6"—12 1/2 lb. 14 1/2 lb. 17 1/2 lb.  
 7"—15 lb. 17 1/2 lb. 20 lb.  
 8"—18 lb. 20 1/2 lb. 23 lb. 25 1/2 lb.  
 9"—21 lb. 25 lb. 30 lb. 35 lb.  
 10"—25 lb. 30 lb. 35 lb. 40 lb.  
 12"—31 1/2 lb. 35 lb. 40 lb. 45 lb. 50 lb. 55 lb.  
 15"—42 lb. 50 lb. 60 lb. 70 lb. 80 lb.  
 18"—55 lb. 70 lb.  
 20"—65 lb. 80 lb. 100 lb.  
 24"—80 lb. 100 lb.

### CHANNELS

3"—4 lb. 6 lb.  
 4"—5 1/2 lb. 6 1/2 lb. 7 1/2 lb.  
 5"—6 1/2 lb. 9 lb. 11 1/2 lb.  
 6"—8 lb. 10 1/2 lb. 13 lb. 15 1/2 lb.

1"—9 1/4 lb. 12 1/4 lb. 14 1/4 lb. 17 1/4 lb. 19 1/4 lb.  
 8"—11 1/4 lb. 13 1/4 lb. 16 1/4 lb. 18 1/4 lb. 21 1/4 lb.  
 9"—13 1/4 lb. 15 lb. 20 lb. 25 lb.  
 10"—15 lb. 20 lb. 25 lb. 30 lb.  
 12"—20 1/4 lb. 25 lb. 30 lb. 35 lb. 40 lb.  
 13"—32 lb.  
 15"—33 lb. 40 lb. 45 lb. 50 lb. 55 lb.

### PLATES

7" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 8" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 8 1/2" x 3-16"  
 9" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 10" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 12" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 14" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 16" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 18" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 20" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 22" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 24" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 26" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 28" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 30" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 36" x 3-16" 1/2" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 42" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 48" x 3-16" 1/2" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 60" x 3-16" 1/2" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"  
 72" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 3/4" 1"

### BLUE ANNEALED SHEETS

No. 16—36" 48" 54"  
 No. 10—36" 48" 60"

### CHECKERED PLATES

34" x 5-16" 3/8" 1/2"

### RAILS AND SPLICES

12 lb. 16 lb. 20 lb. 25 lb. 30 lb. 45 lb. 60 lb.  
 75 lb. 90 lb.

### RIVET RODS

1/2" 5/8" 3/4" 7/8" 1"

### RIVETS

1/2" 5/8" 3/4" 7/8" 1"

### ZEEES

3" x 1/4" 5-16" 3/8" 7-16" 1/2"  
 4" x 1/4" 5-16" 3/8" 7-16" 1/2"  
 5" x 5-16" 3/8" 7-16" 1/2"  
 6" x 5/8" 7-16" 1/2"

### TEES

1" x 1" x 1/4"  
 1 1/2" x 1 1/2" x 3-16"  
 1 1/2" x 1 1/2" x 1/2"  
 1 1/2" x 1 1/2" x 3/8"  
 2" x 2" x 1/4"  
 2 1/2" x 2 1/2" x 1/4"  
 2 1/2" x 2 1/2" x 3-16"  
 3" x 3" x 5-16" 3/8"  
 3 1/2" x 3 1/2" x 5/8"  
 3 1/2" x 3 1/2" x 3/8" 1/2"  
 4" x 4" x 1/4"  
 4" x 5" x 5/8" 1/2"

### FLATS

1" x 3-16" 1/2"  
 1 1/2" x 3-16" 1/2"  
 1 1/2" x 3-16" 1/2" 5-16" 3/8" 1/2" 5/8"  
 1 1/2" x 1/4" 5-16" 3/8"  
 2" x 3-16" 1/2" 5-16" 3/8" 1/2" 5/8"  
 2 1/2" x 1/4" 5-16" 3/8" 1/2" 5/8"  
 2 1/2" x 1/4" 5-16" 3/8" 1/2" 5/8"  
 3" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 1"  
 3 1/2" x 5-16" 3/8" 7-16" 1/2" 5/8" 1"  
 4" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 1"  
 5" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 1"  
 6" x 1/4" 5-16" 3/8" 7-16" 1/2" 5/8" 1"

### ROUNDS

1/2" 5/8" 3/4" 7/8" 1" 1 1/4" 1 1/2" 1 3/4" 1 1/2"  
 1 3/8" 1 1/2" 1 3/4" 2" 2 1/4" 2 1/2" 2 3/4" 3"  
 3 1/4" 3 1/2" 3 3/4" 4" 4 1/4" 4 1/2" 4 3/4" 5"

### SQUARES

1/2" 5/8" 3/4" 7/8" 1" 1 1/4" 1 1/2" 1 3/4" 2"  
 2 1/4" 2 1/2" 2 3/4" 3" 3 1/4" 3 1/2" 3 3/4" 4"

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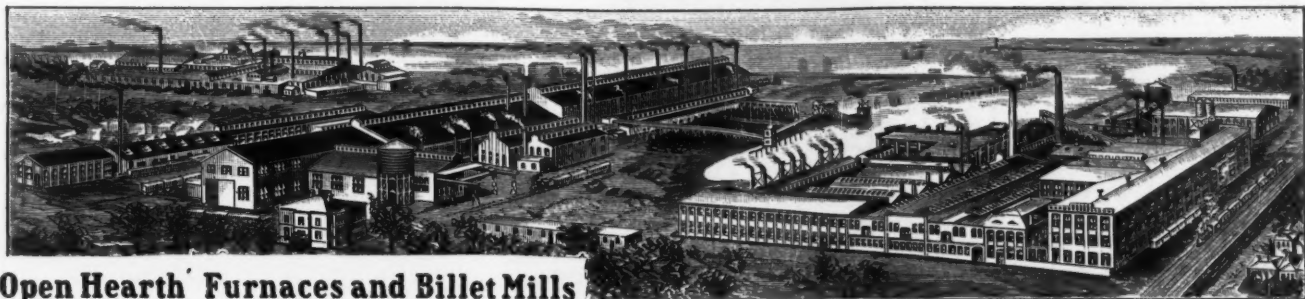
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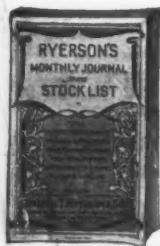
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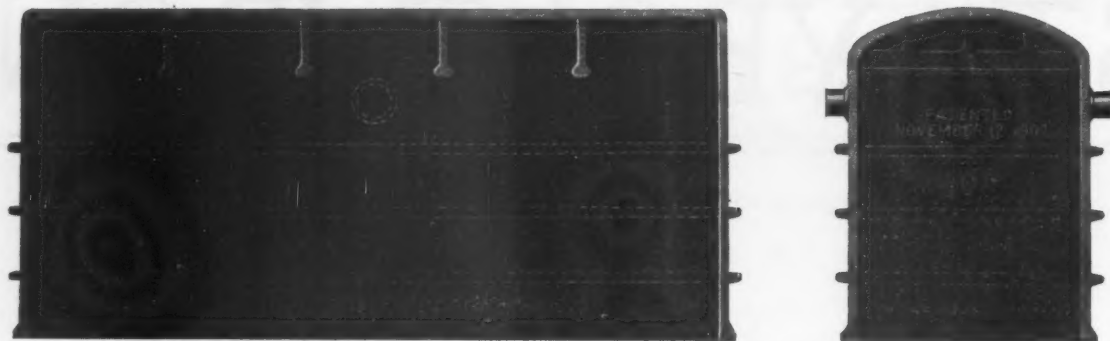
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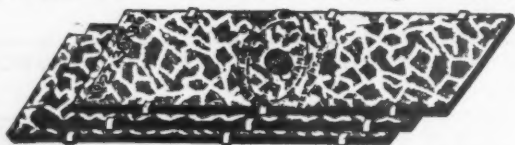
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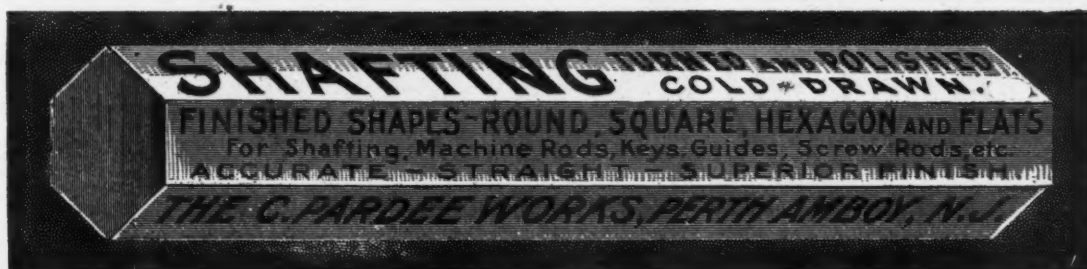
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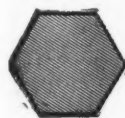
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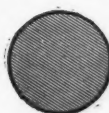
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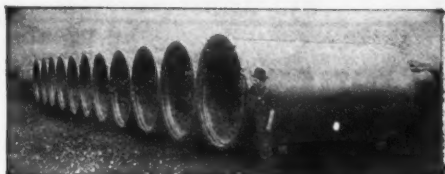
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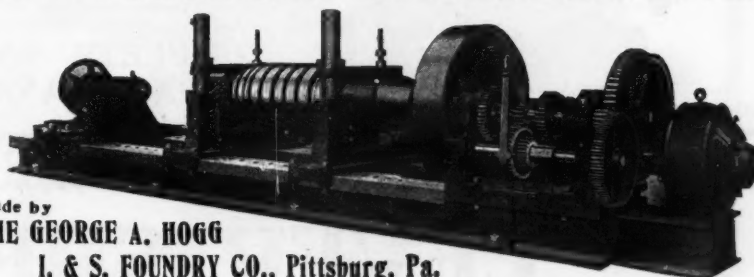
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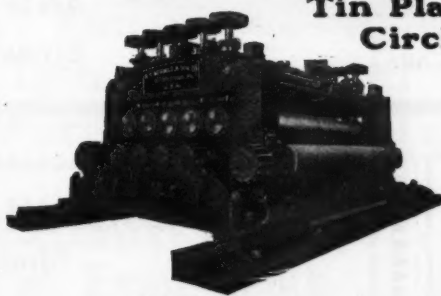


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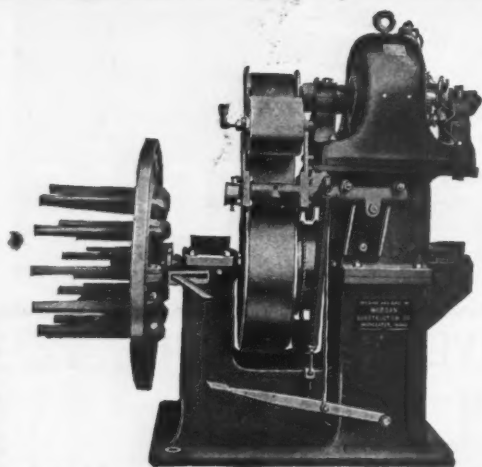
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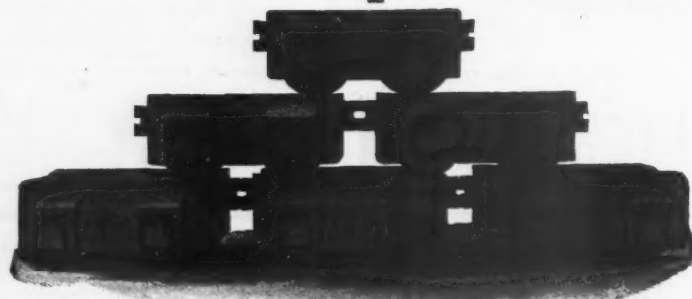
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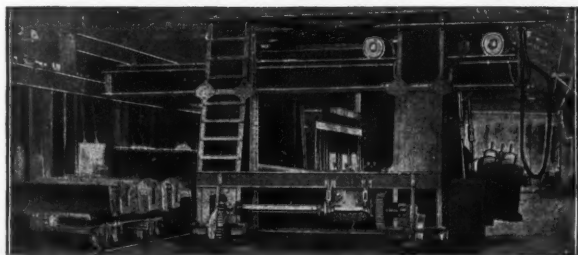


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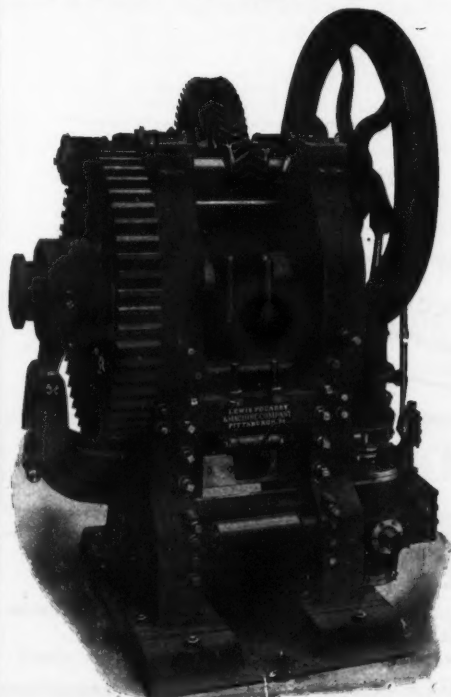
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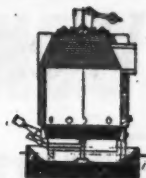
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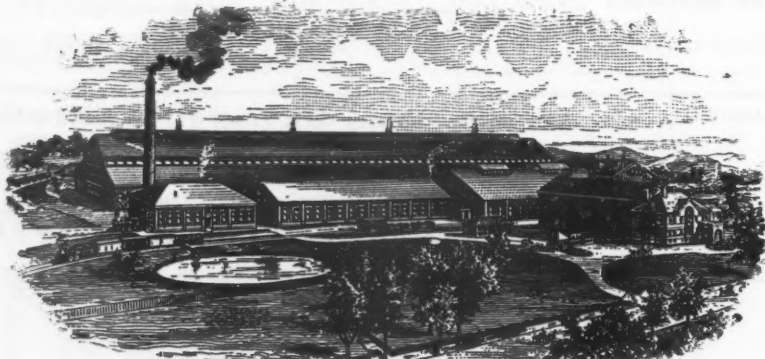
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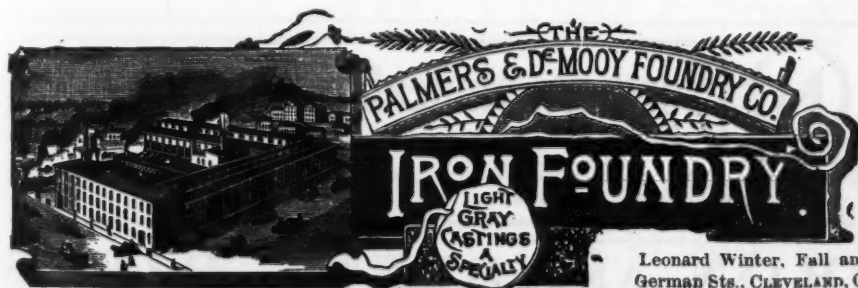
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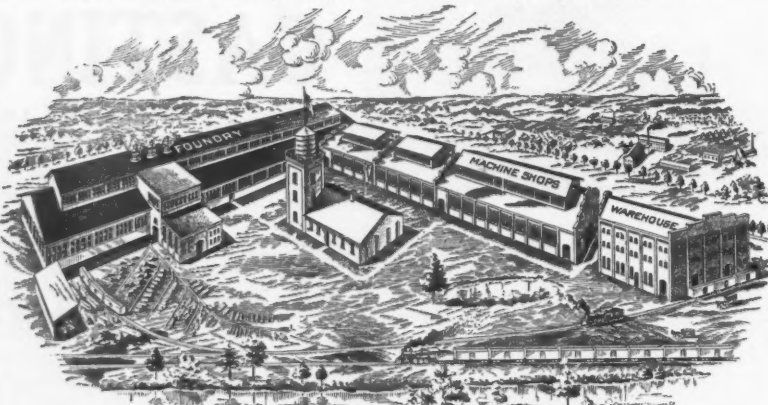
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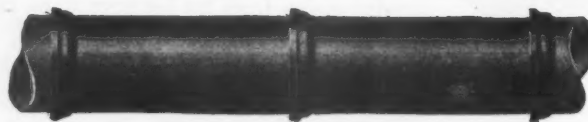
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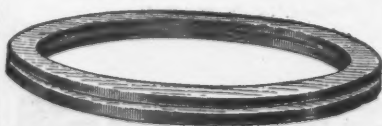
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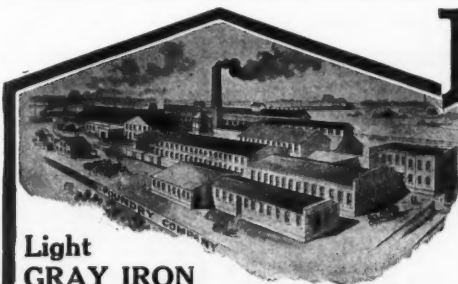
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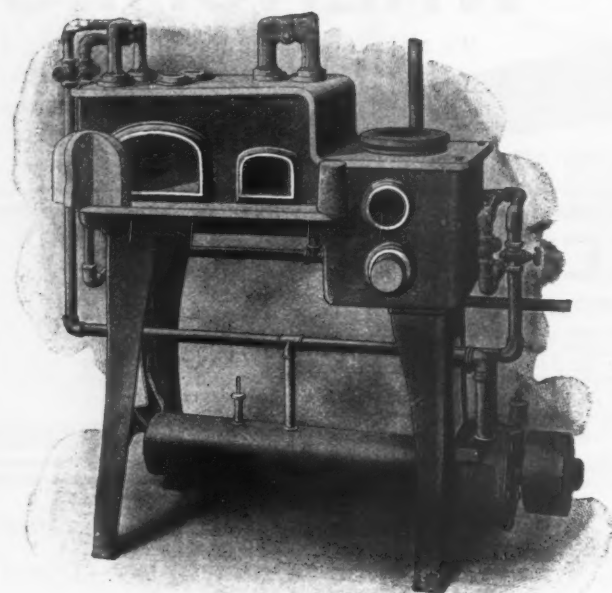
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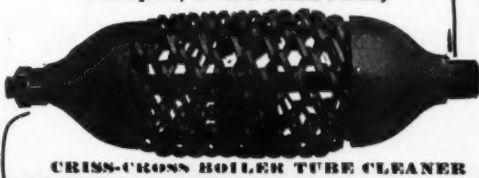
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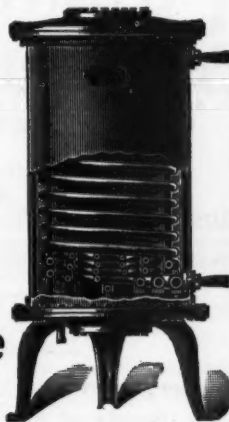
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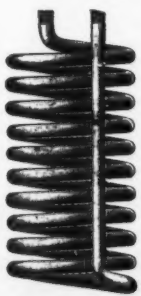
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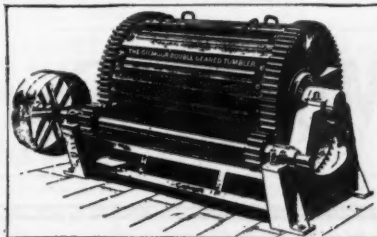
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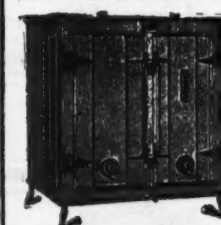


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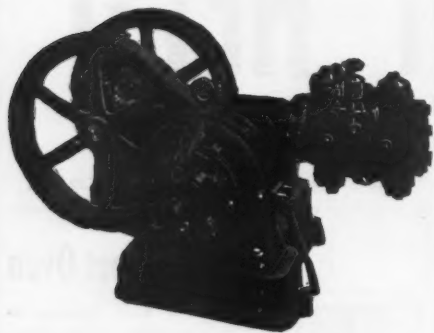
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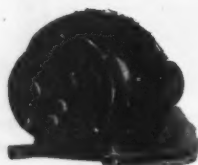
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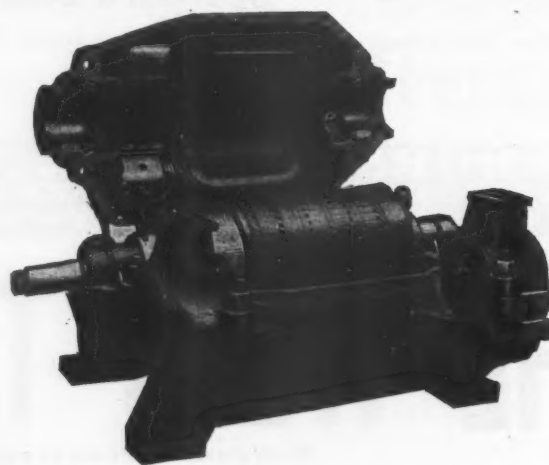
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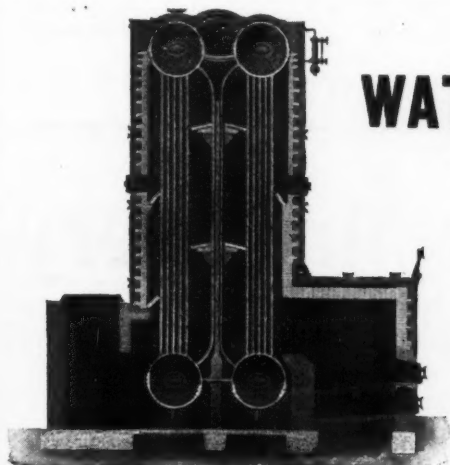
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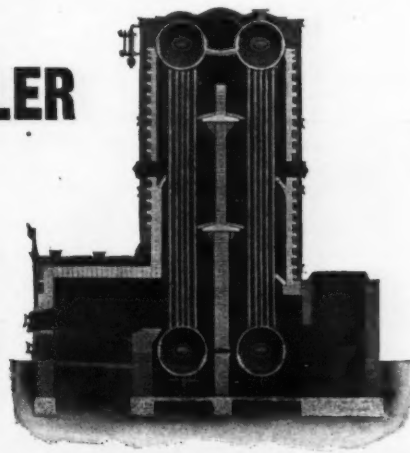
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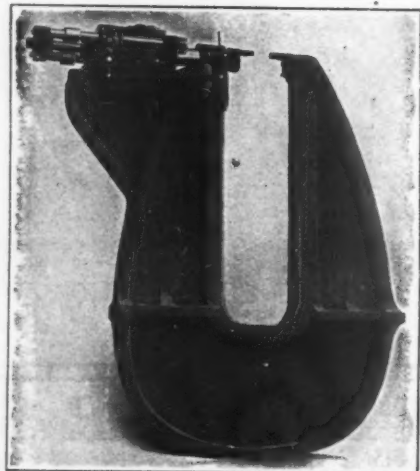
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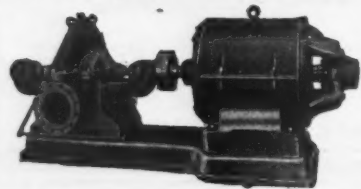
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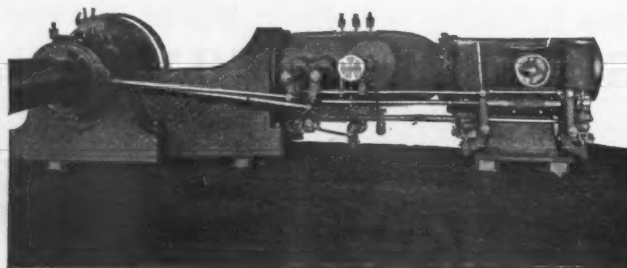
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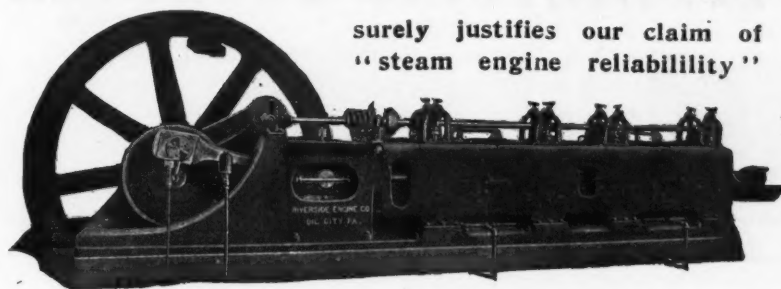
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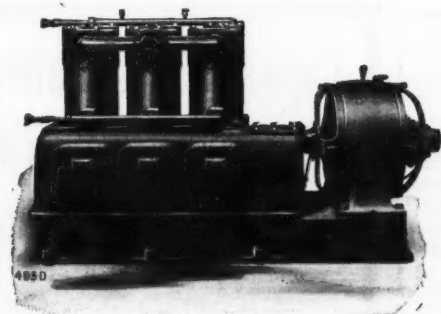
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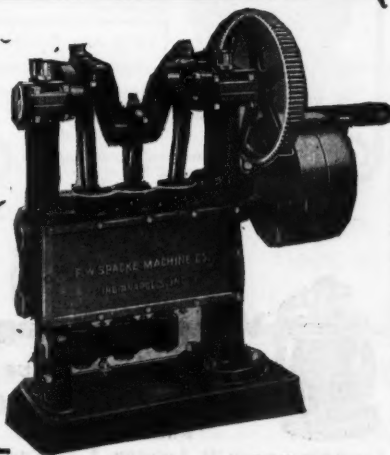
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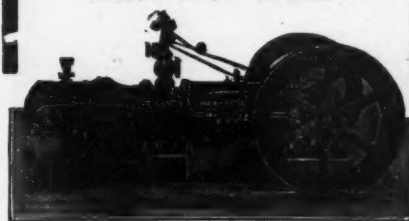
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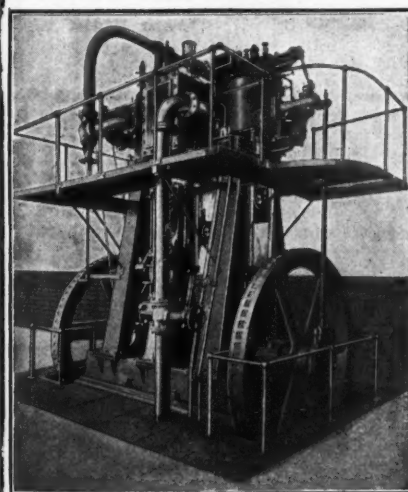
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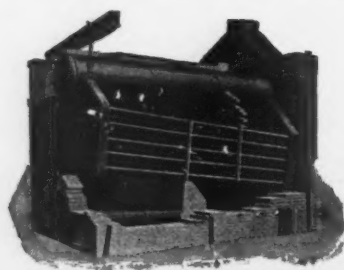
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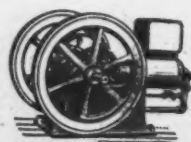
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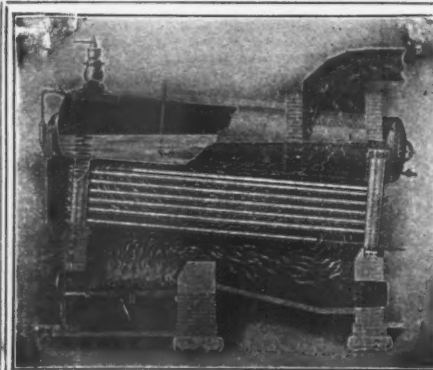
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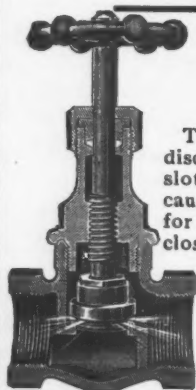
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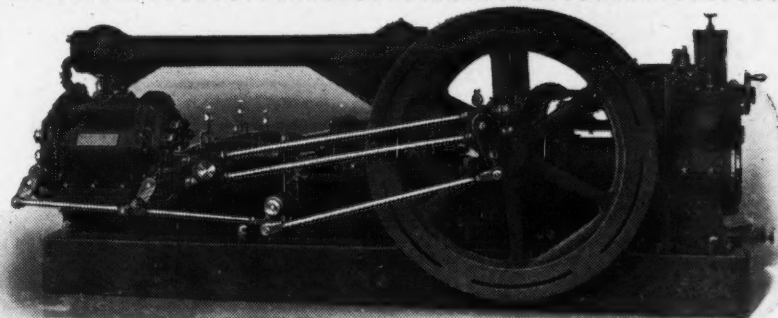
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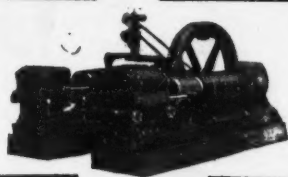
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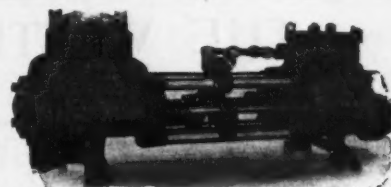




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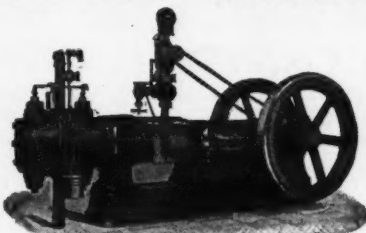
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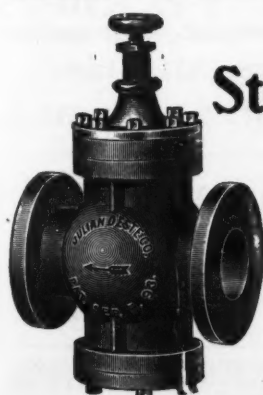
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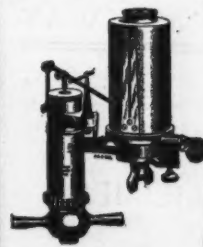
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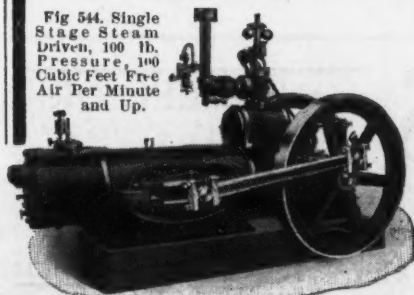
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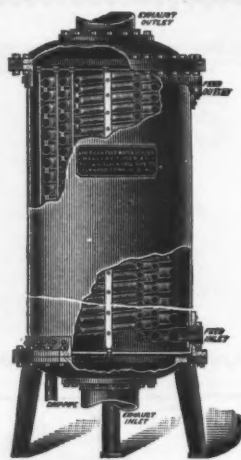
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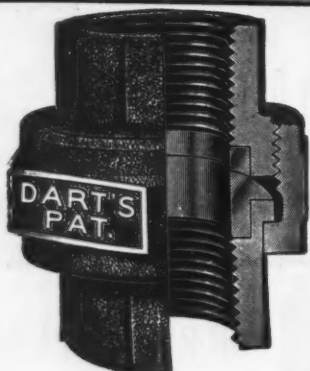
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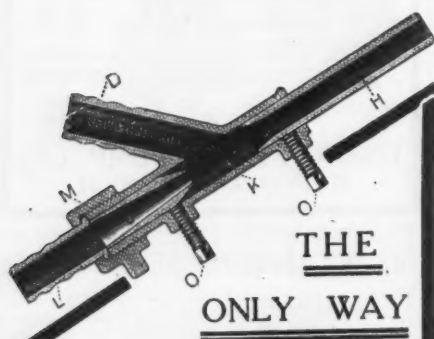
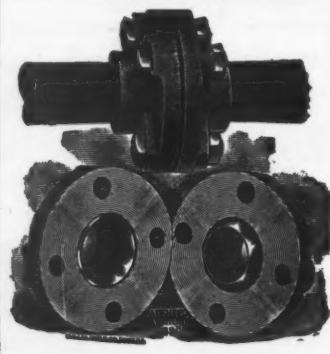


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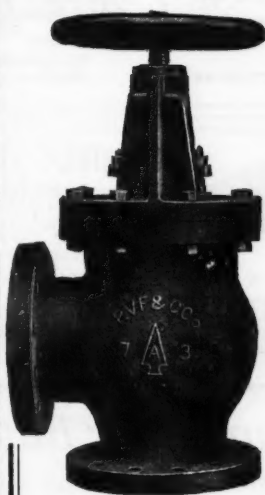
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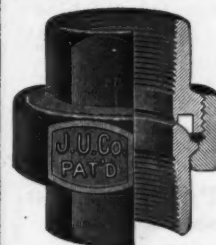
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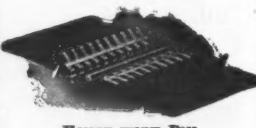
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**HONESTLY MADE HONESTLY MARKED**

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**No Tool required but a Hammer.**  
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You will want the Philips Pulley when we get acquainted, because you will like its face, as it is perfect and surpasses all other pulleys in this respect.

It will run true, and is thoroughly reliable.  
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2nd. Ever since the banks last winter held up manufacturers and demanded a fine of \$3.00 per hundred for their own money for pay rolls, people are not as sure as they were that Bryan is wrong.

3rd. In four years Mr. Bryan has greatly grown in popularity with all the people.

4th. Mr. Bryan is a good religious man.

5th. The American people at heart are a deeply religious people. If you doubt it count the church steeples.

Oh, yes, I know lots of you careless fellows use strong language sometimes, and I would never select you for Sunday School teachers, yet you are more religious than you think. You never get away from those seven or eight years at the mother's knee. And you all have "women folks"!

No, brother, Mr. Taft will never arrive. Even a Steam-Hydraulic Elevator, with all its excellence and popularity could not lift Mr. Taft into the White House.

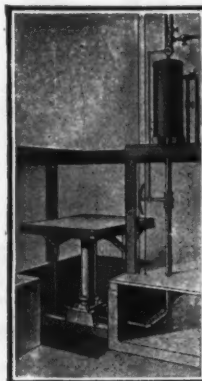
It looks like Taft and it looks like Bryan, and it looks like another sad four years of the brand known as "Cleveland's Administration."

At any rate, whether I am a philosopher or a prophet or a "what," this little bit of politics is simply to get your attention while I holler:—

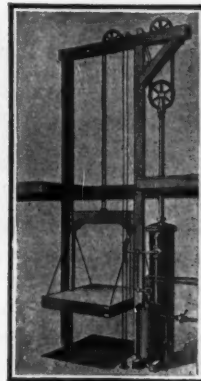
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**CRAIG RIDGWAY & SON CO.**

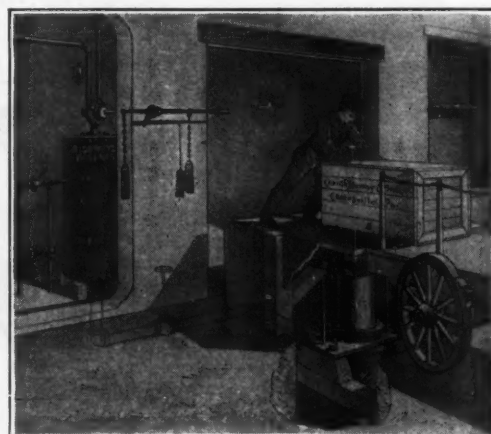
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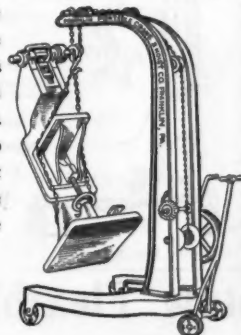


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It's quite as important that you remember the name of the **One Man Hoist**, as well as the fact that a load up to 4,000 pounds doesn't overexert the **Hoist** or the **Man**.



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We build the best Cranes  
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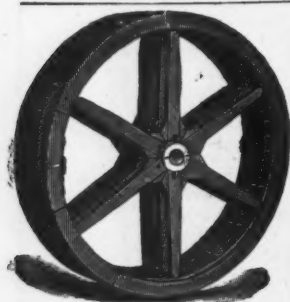
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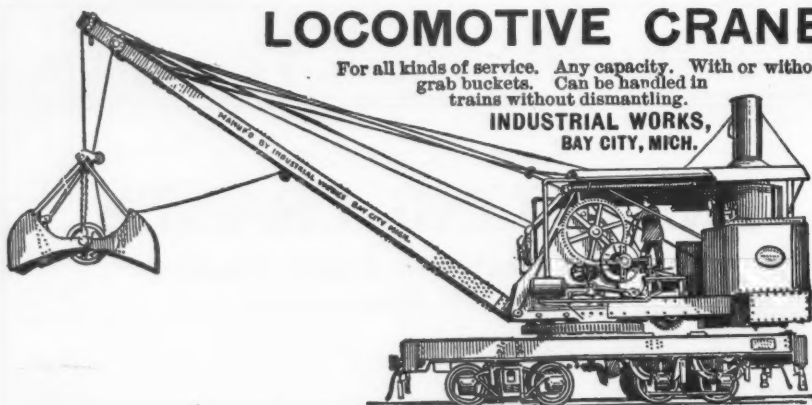
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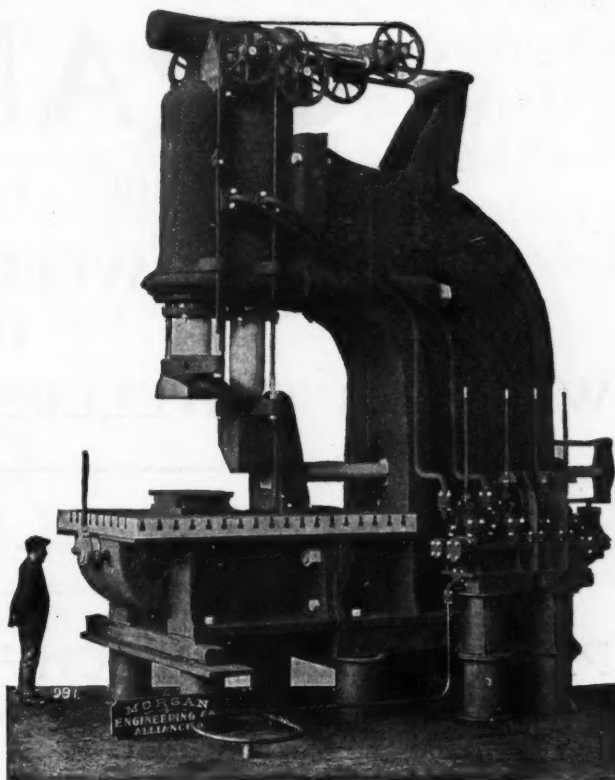
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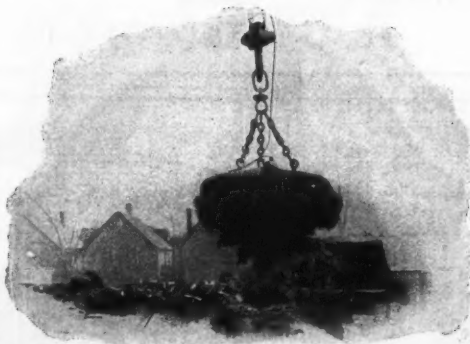
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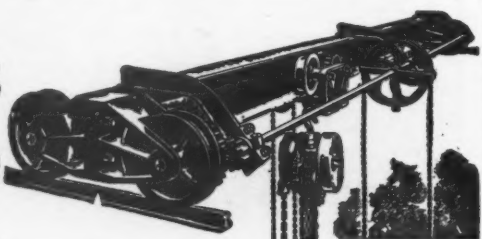
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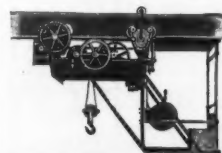
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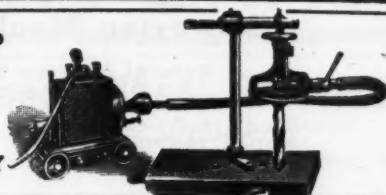
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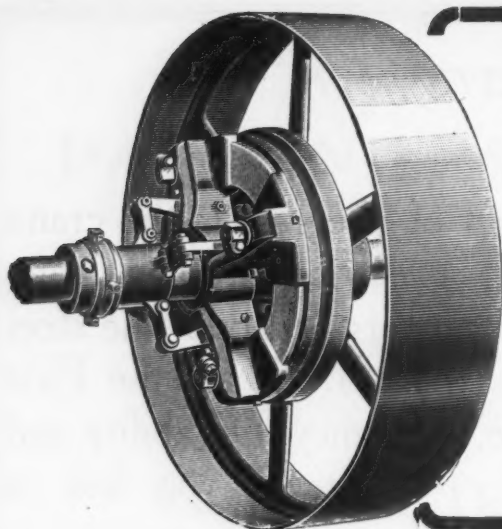
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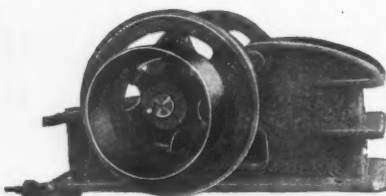
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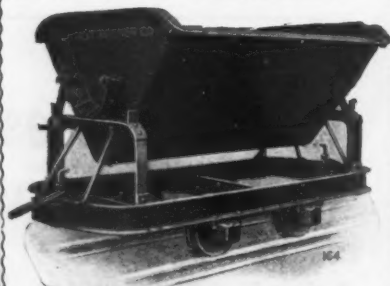
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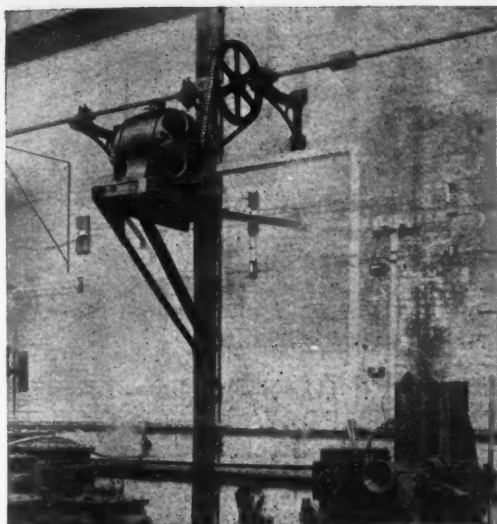
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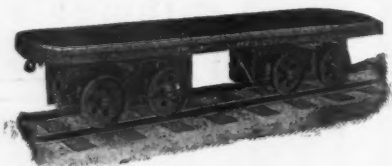
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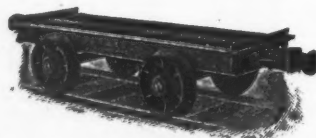
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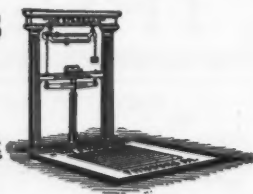
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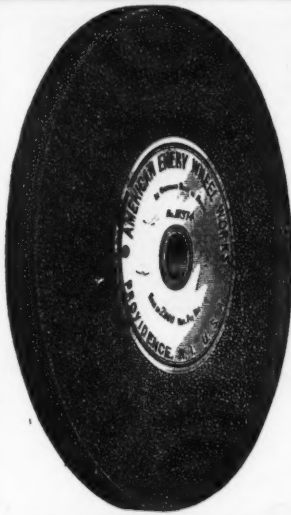
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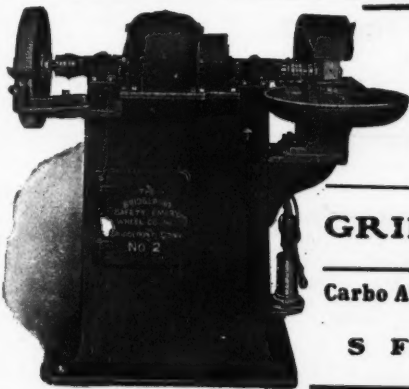
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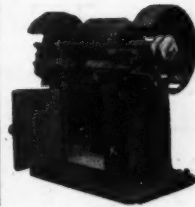
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Have you seen our controlling device? The periphery speed being constant with wear of wheel.

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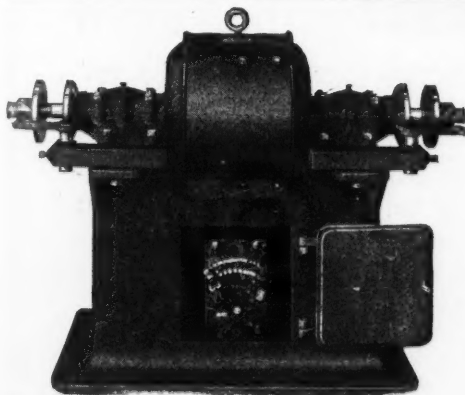
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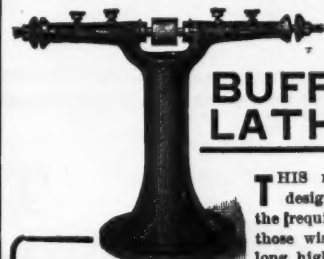
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ABILITY to produce the one and willingness to apply the other, has won for us the confidence of Emery users of our great country. May we get yours? Give us a trial. We'll stand the expense!

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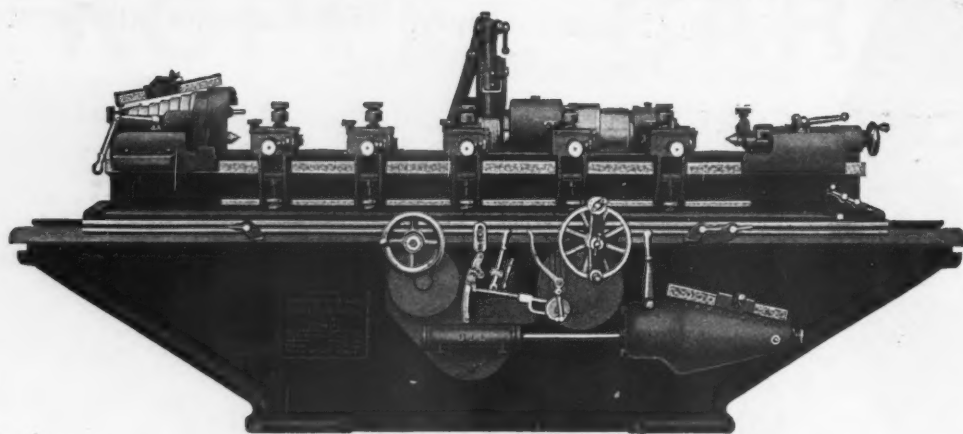
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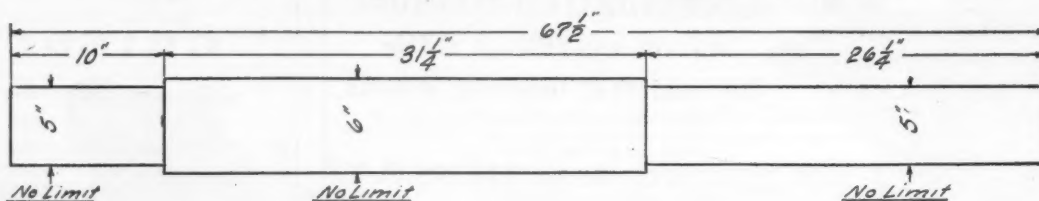


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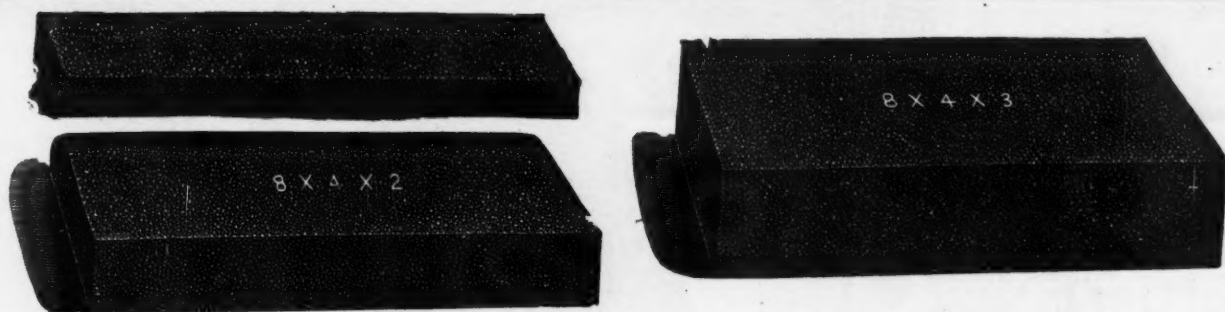
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are mighty handy to have in your shop equipment. Cheap, durable and will do the work quickly. They are a specialty with

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*Hardest and Sharpest—Fastest Cutting  
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Made in all sizes,  
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Designed and built by F. N. Gardner, well-known  
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In grinding, as in everything else, it's the  
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Something entirely new.  
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For rapid and accurate work.  
The lubricant keeps the cutting  
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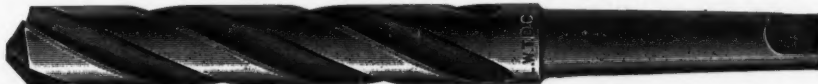
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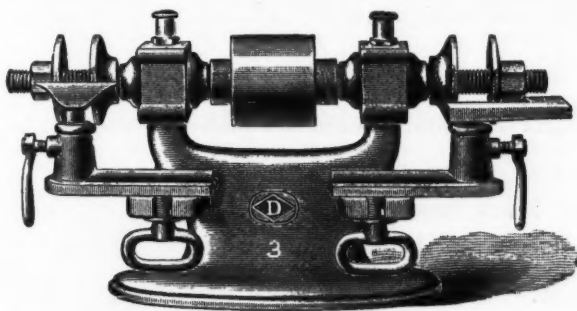
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Our cut shows a No. 3 Grinder. It takes  
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While you may not see any "real money," if you will use "**Norka**," **High Speed Twist Drills**, you can save a big slice from the cash you are paying now for drilling.



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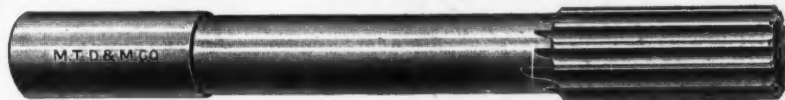
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New Bedford, Mass., U. S. A.

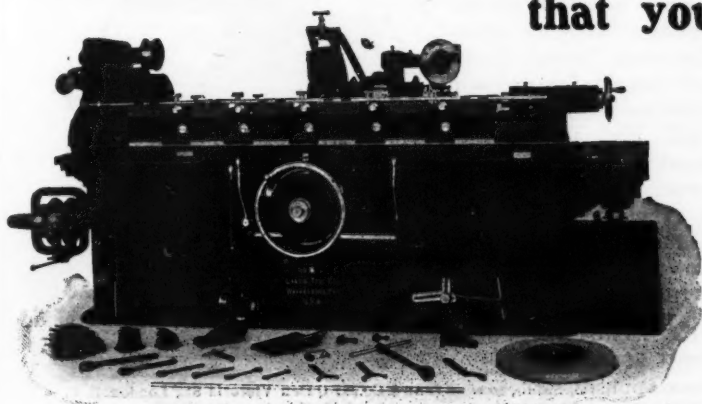


This Fluted Chucking Reamer is used in a screw or chucking machine usually following a three-groove chucking reamer. The teeth of this reamer have radial relief, and is made a few thousandths under size, allowing a standard reamer to follow it.

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Drills, Reamers, Cutters, Chucks, Taps, Dies, Arbors, Counterbores, Countersinks, Gauges, Machines, Mandrels, Mills, Screw Plates, Sleeves, Sockets, Taper Pins and Wrenches.

## Finishing your machine parts by grinding is a strong proof that you have studied economy



Our plain grinding machine here shown is one type of the heavy manufacturing kind.

It has powerful grinding wheel, traverse and work drives.

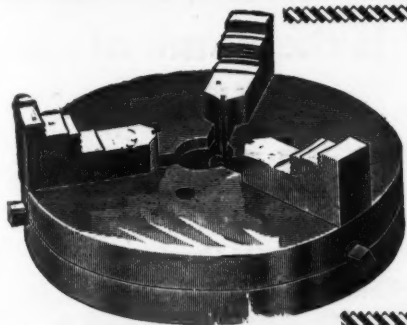
It has centrifugal pump that furnishes an ample supply of water to the wheel and work and during the operation of grinding the operator and the finished parts of the machine are well protected by the water guards.

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Mfgs. of Chucks Exclusively



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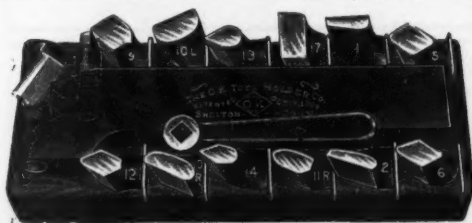


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pinion and gear teeth always in perfect mesh

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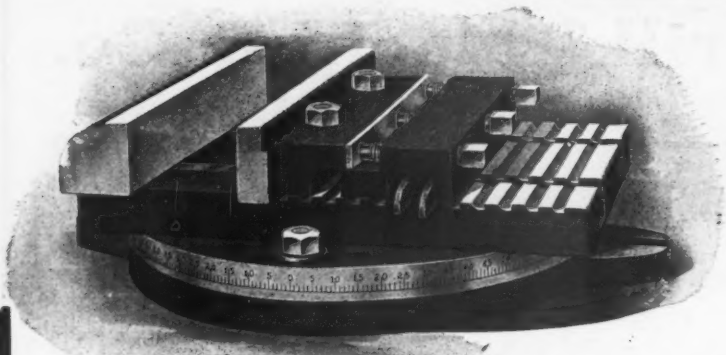


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## MODERN, HIGH SPEED Barbed Wire Machines

Built by  
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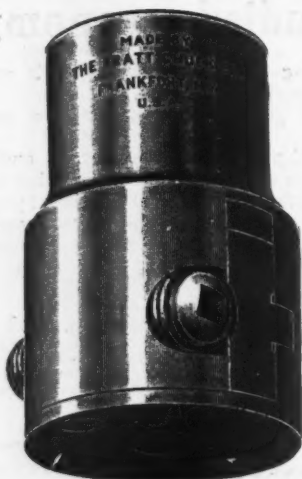
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Round Base or  
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EIGHT SIZES

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are SIMPLE, RIGID, STRONG.  
Easy and Solid Adjustment  
Perfect Clearance.

They are made in 7 sizes each, right and left hand Offset Shank, and 6 sizes each, right and left hand Straight Shank.

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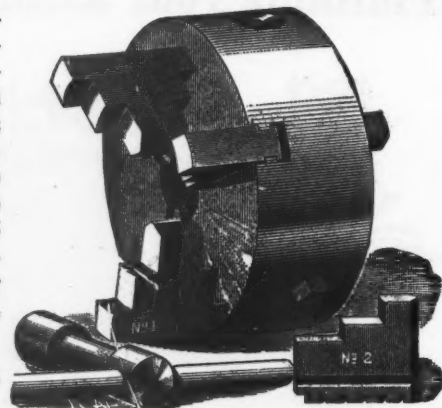
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"The Tool Holder People"

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Satisfied users say so.  
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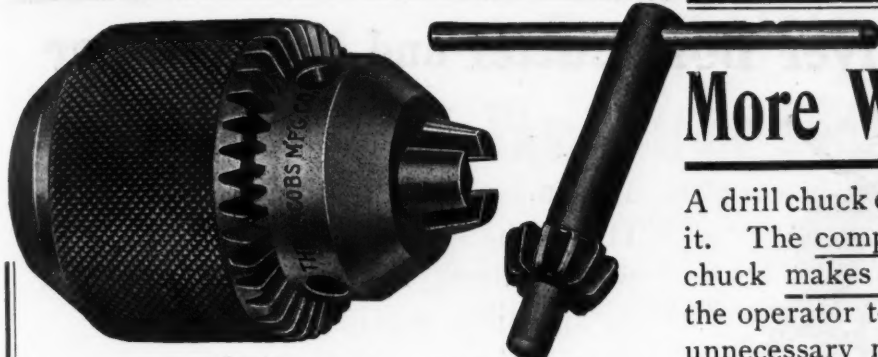
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Manufacturers of

## Draw Benches & Special Machinery

For Tubing and Sheet Metal.

DIES A SPECIALITY  
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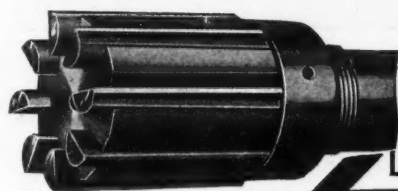
## More Work or Less?

A drill chuck either makes work or saves it. The complicated old style spanner chuck makes work, because it compels the operator to go through a whole lot of unnecessary movements.

## The Jacobs Improved Drill Chuck Saves Work

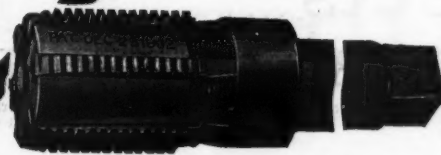
because it's so simple that the operator has only two movements to make. The Key permits him to lock or unlock the chuck with one hand—his other hand is left free to insert or remove the drill. This method of saving work isn't a bad idea, is it?—especially these hot days when every unnecessary movement of the arms is doubly tiresome. Our catalog explains all the details.

**The Jacobs Manufacturing Co.,**  
Hartford, Conn., U. S. A.



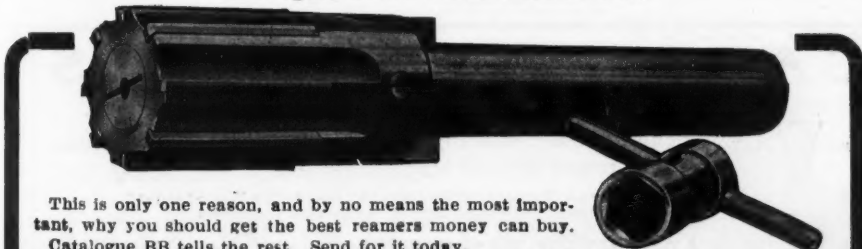
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is no higher than that of less efficient tools.



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GEOMETRIC  
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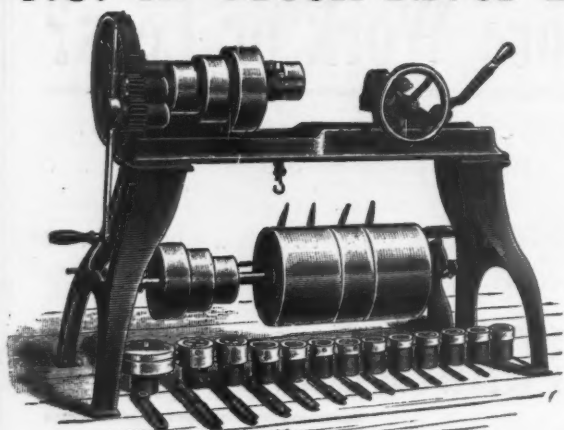
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Pipe up to 15 inch handled easily in small room.

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## No. 42 Green River Bolt-Cutter and Nut-Tapper



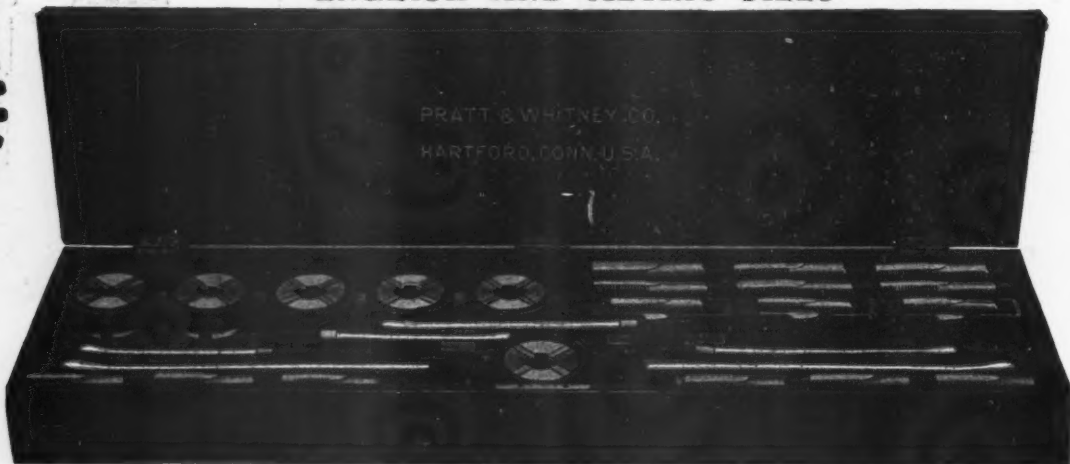
Threads Bolts and Nuts  $\frac{1}{4}$  to  $1\frac{1}{2}$  in., and Pipe  $\frac{1}{8}$  to 2 in. Has a hand attachment to use when power is not available. A splendid machine at a very low price. Catalog 33a and prices on application. : : :

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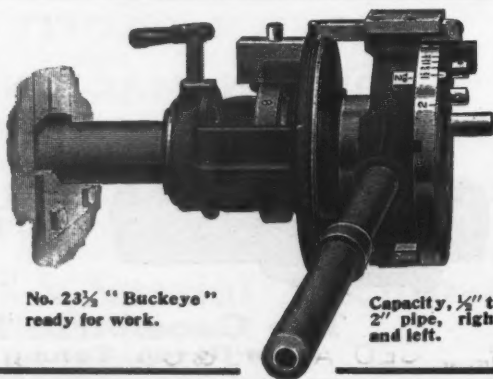
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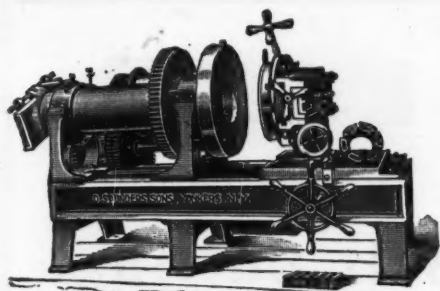
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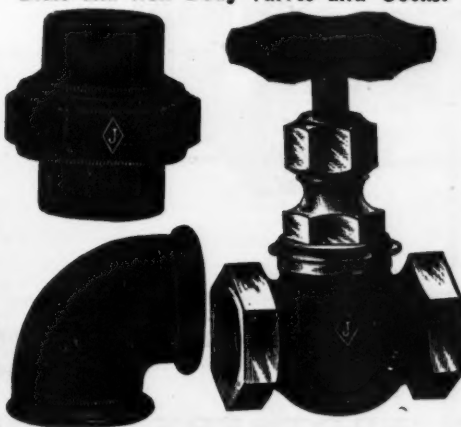
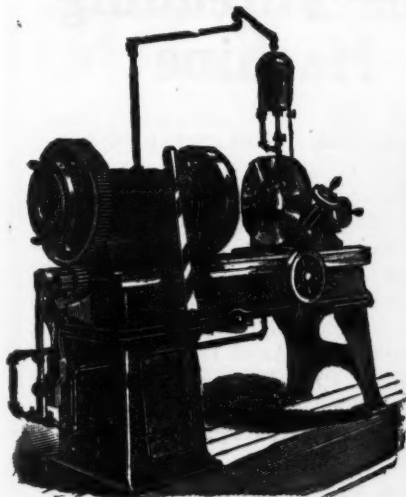
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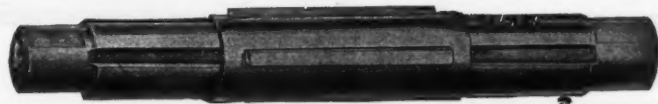
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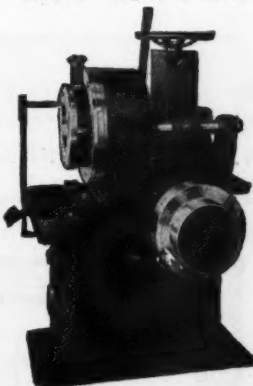
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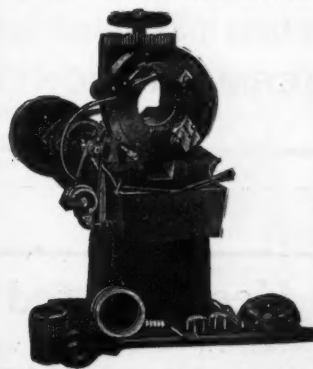
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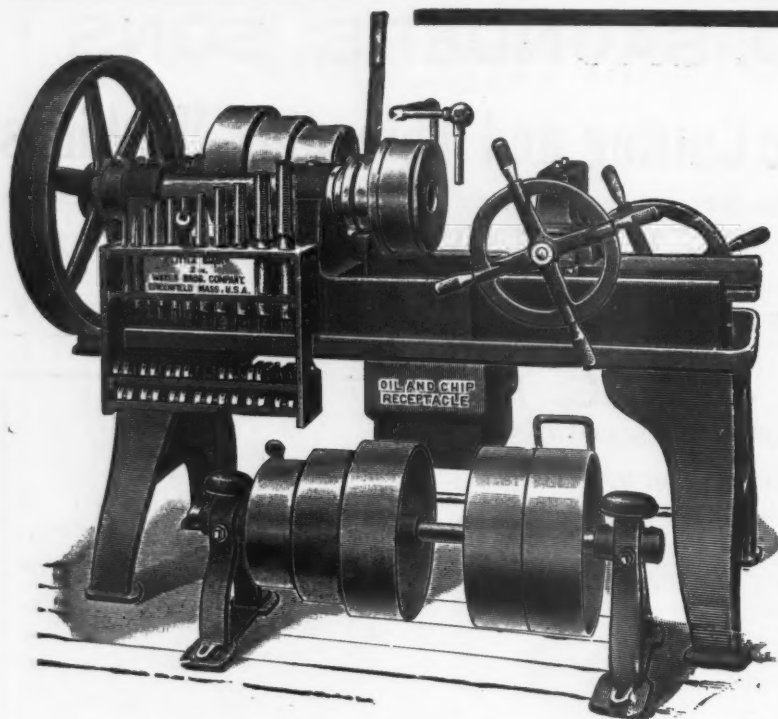
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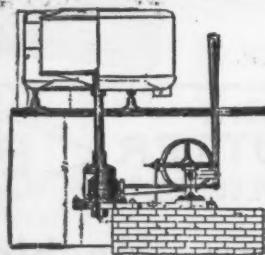
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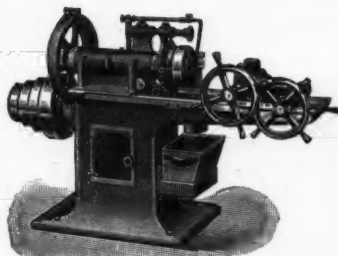
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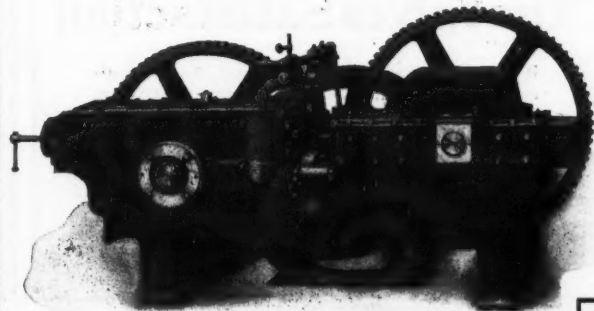
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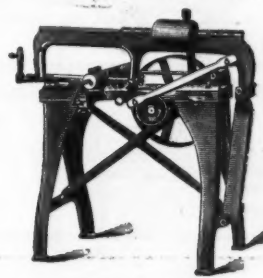
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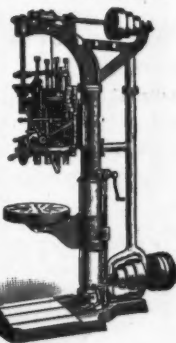
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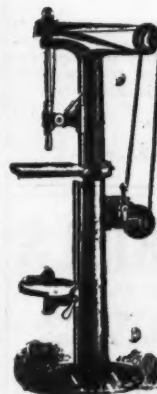
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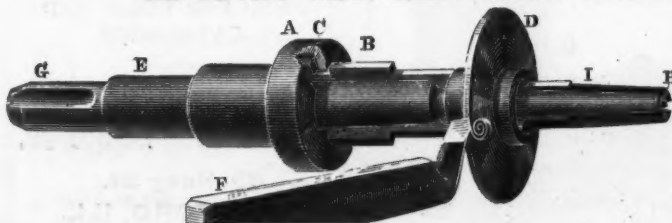
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676,324 34,860, 34,861, 34,862, 34,863,  
34,864, 34,865, 697,639. Also Great  
Britain Patent  
No. 9,660, May  
25, 1900.

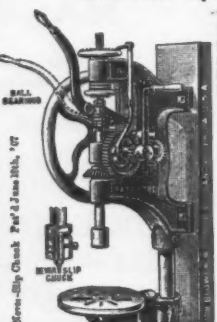


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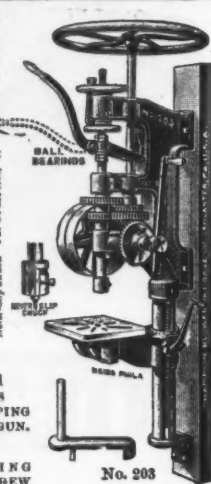
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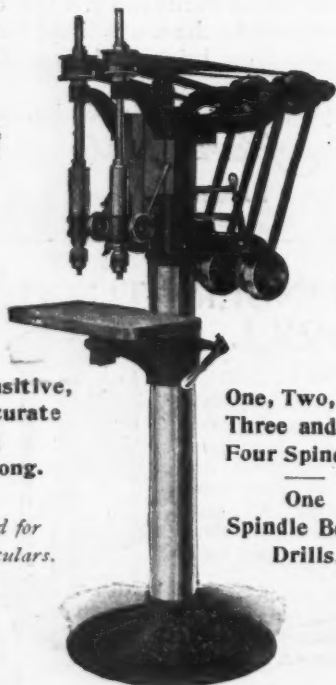
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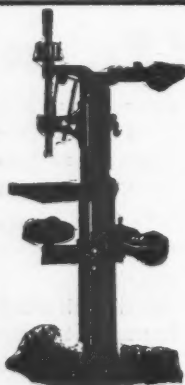
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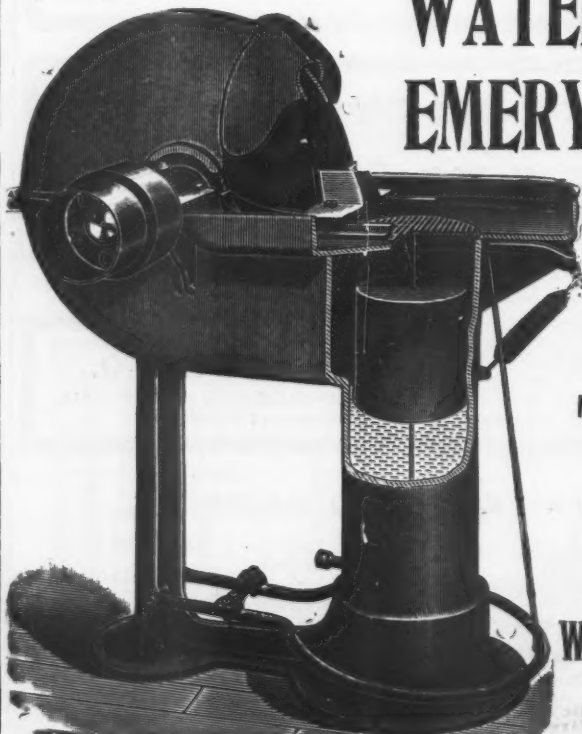
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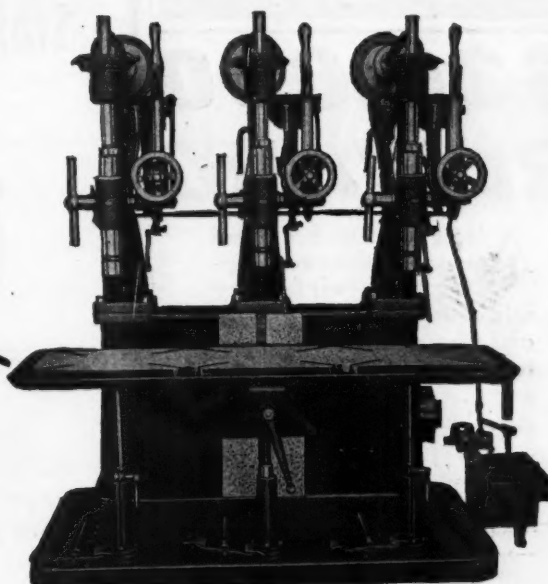
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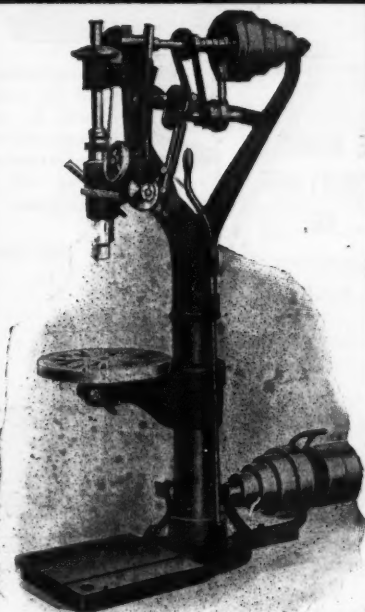
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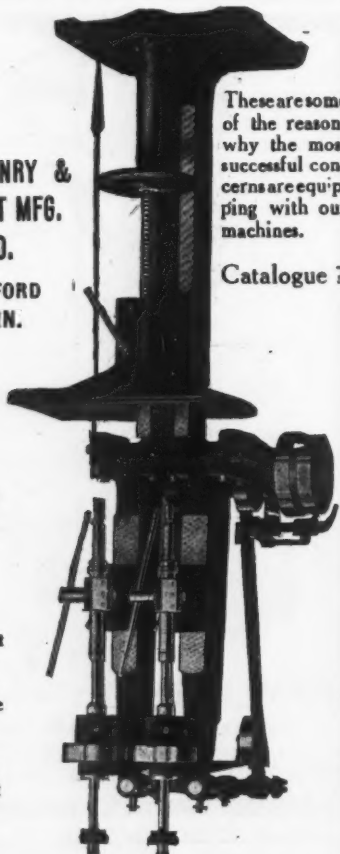
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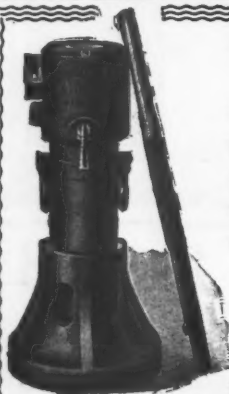
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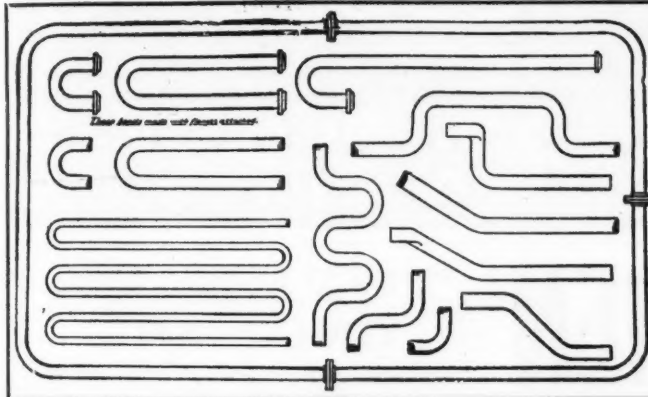


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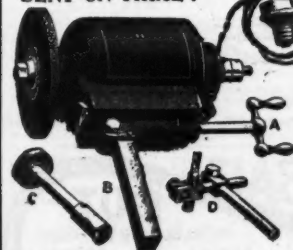
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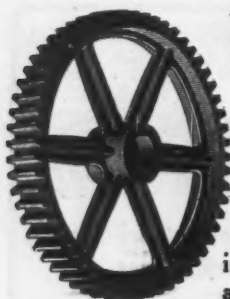
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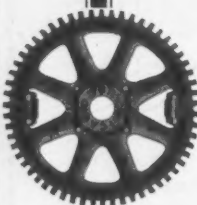
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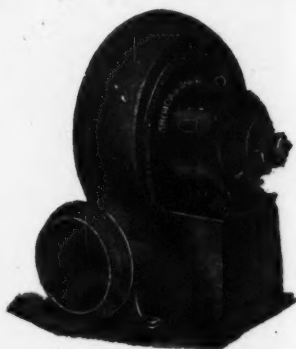
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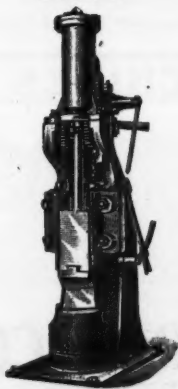
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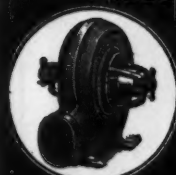
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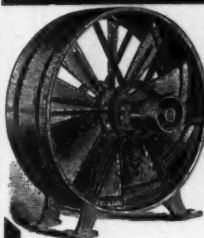
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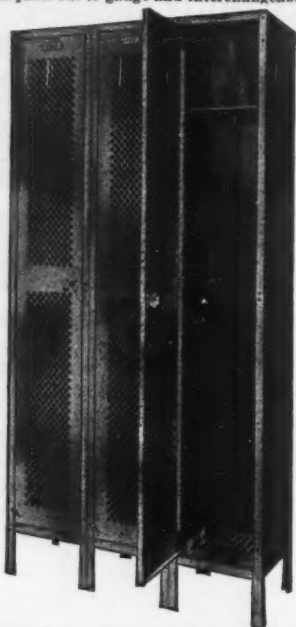
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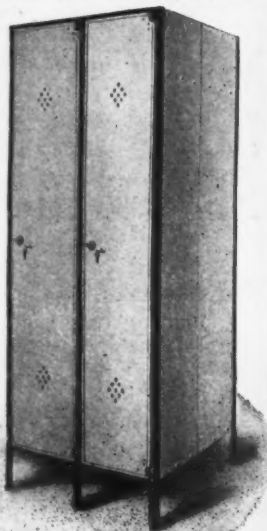
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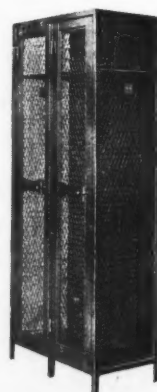
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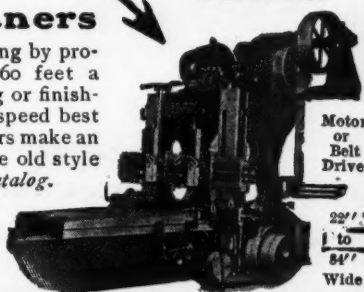
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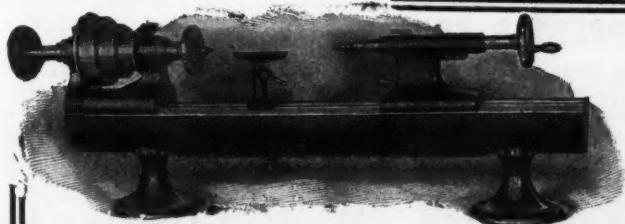
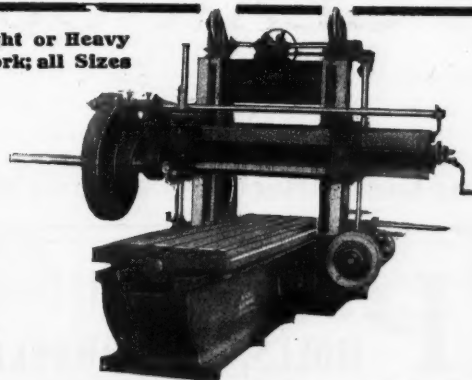
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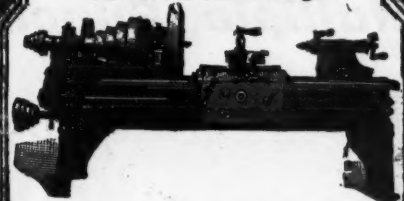
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12 to 32 in. Swing.



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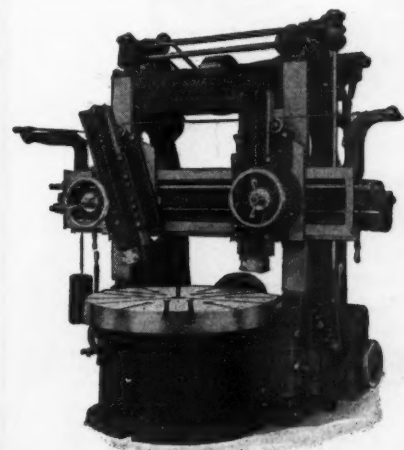
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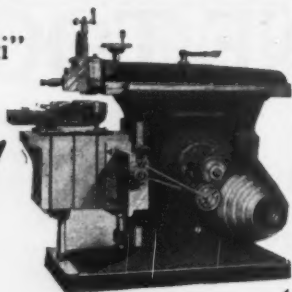
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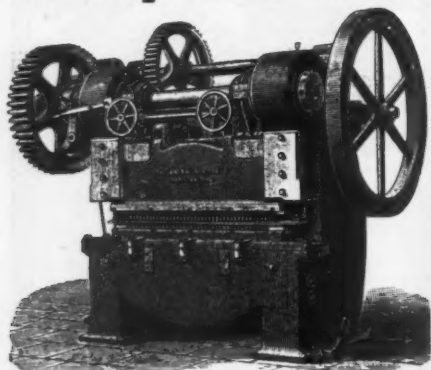
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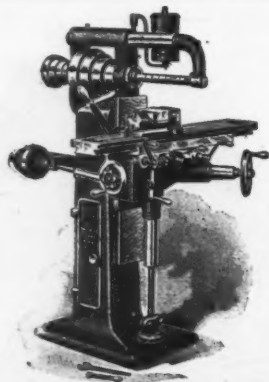
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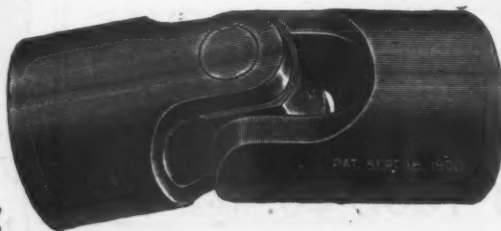
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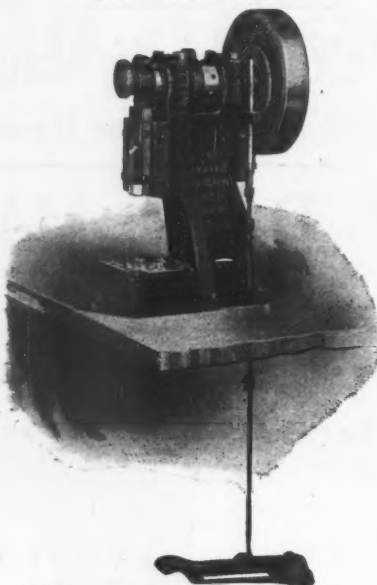
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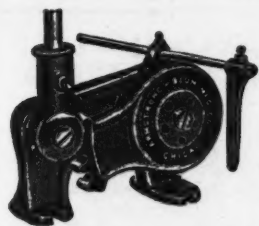
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**THREE SIZES** { No. 5, cuts  $\frac{3}{8}$  inch and down  
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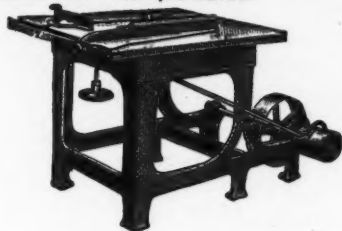
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For Factories  
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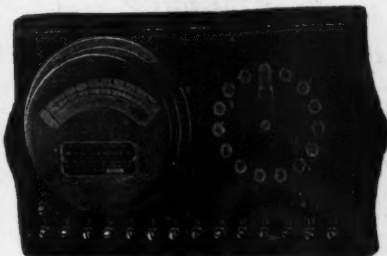
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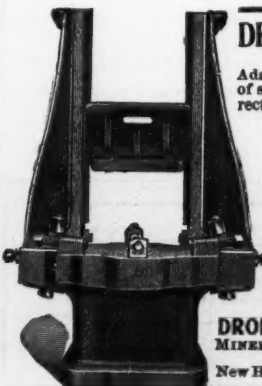


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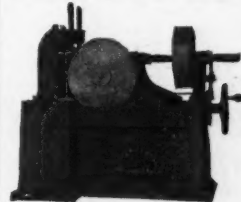


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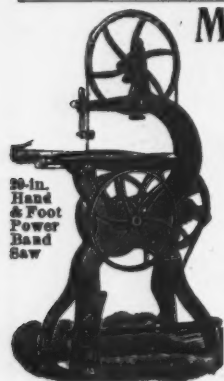
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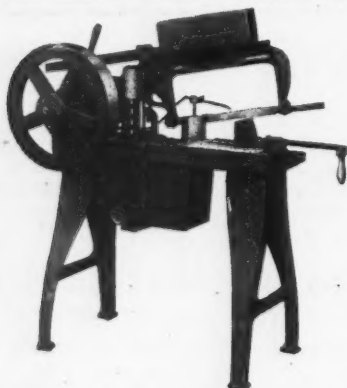
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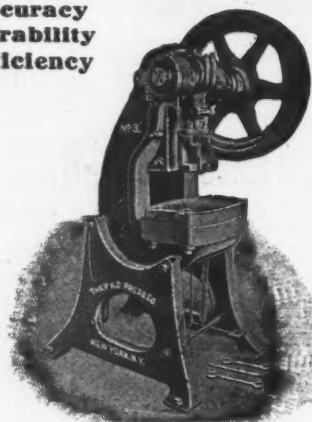
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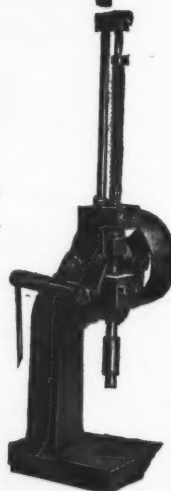
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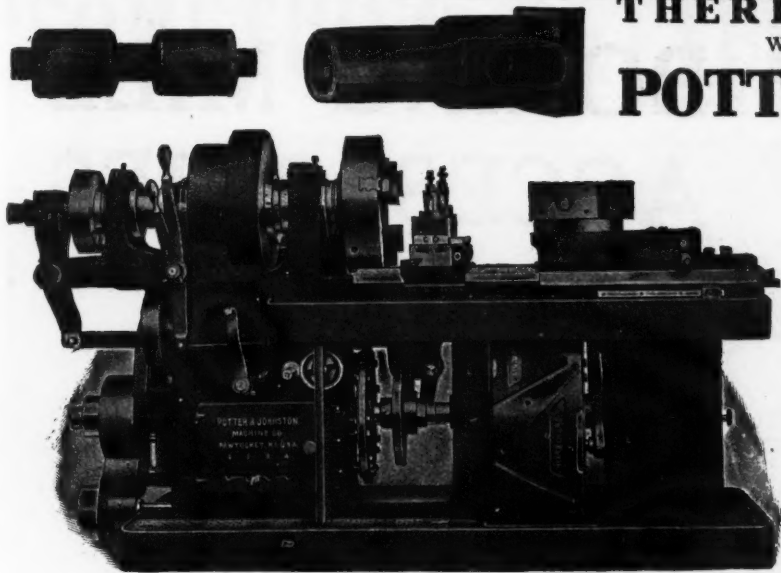
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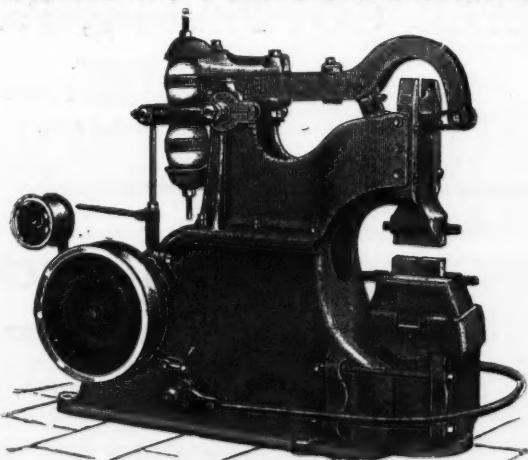
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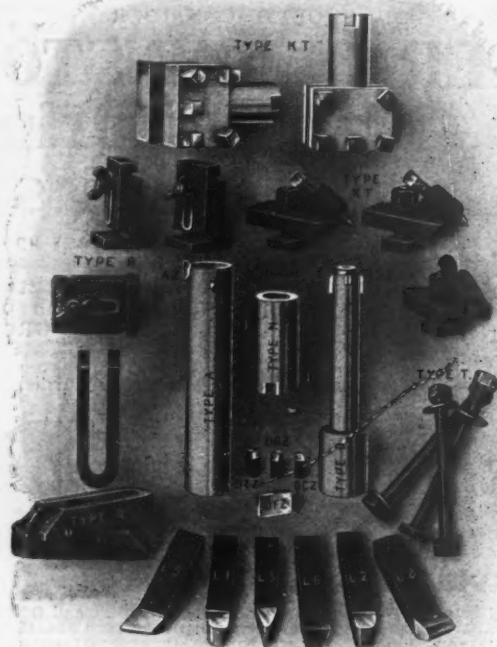
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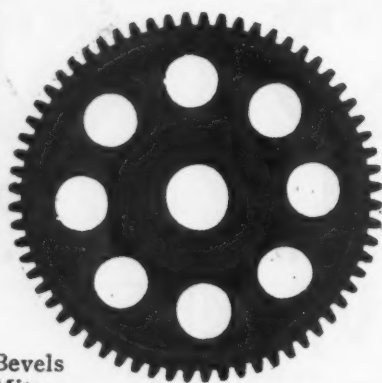
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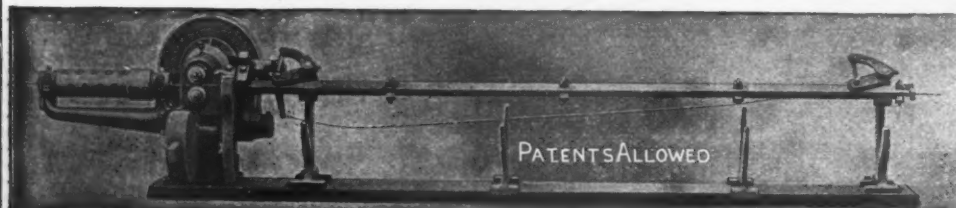
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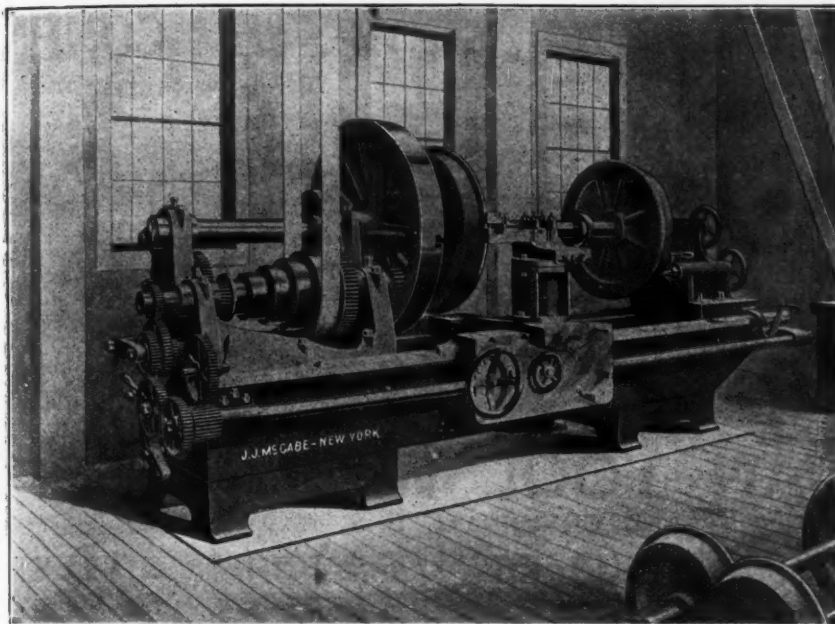
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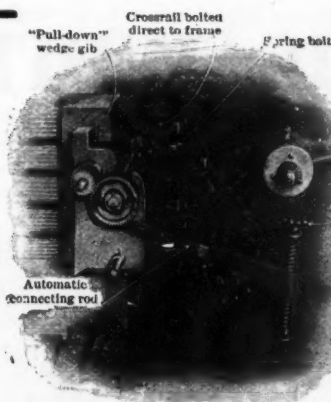
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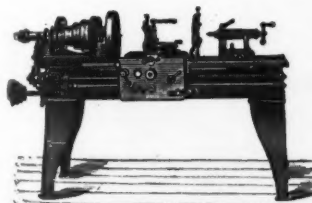


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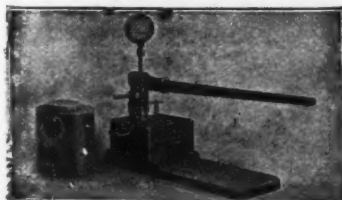
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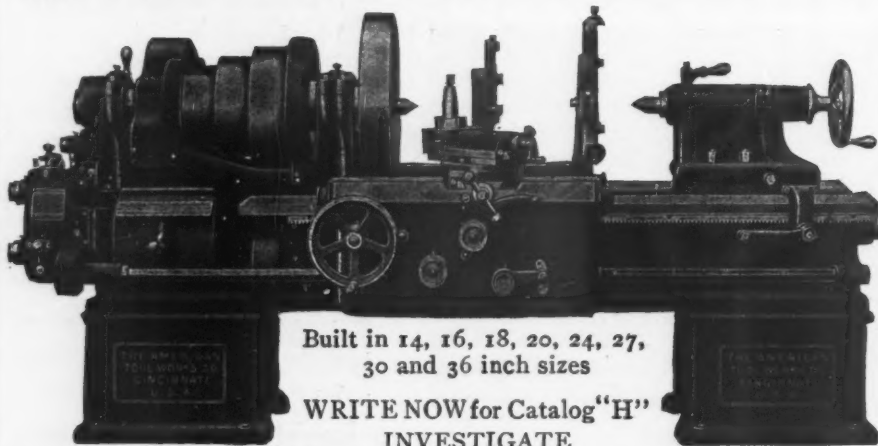
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12, 14, 16 inch Swing.

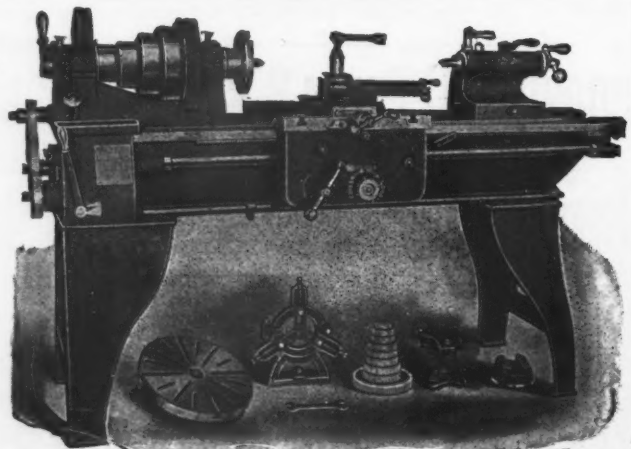
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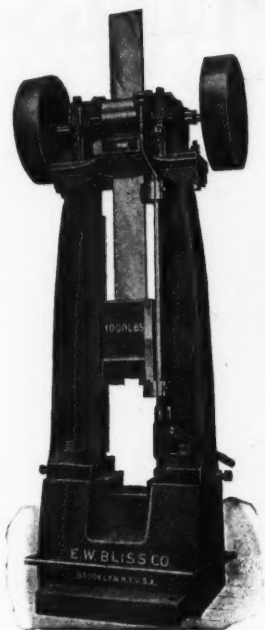


14 in. x 6 ft. Engine Lathe. Weight 1630 lbs.

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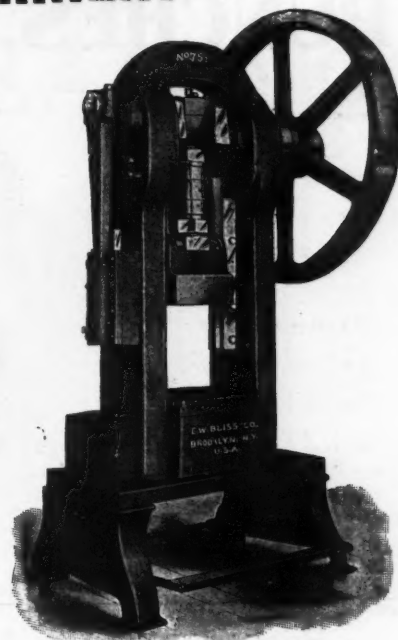
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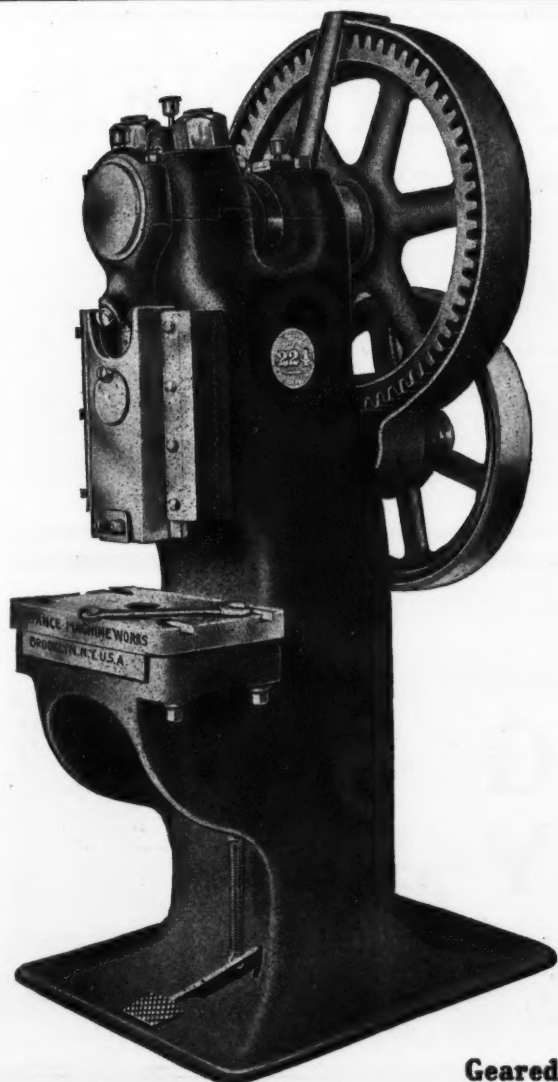
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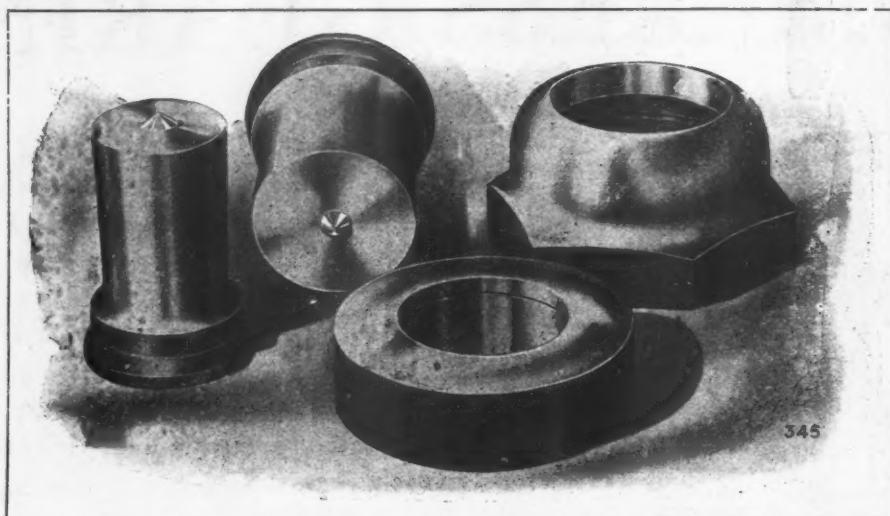
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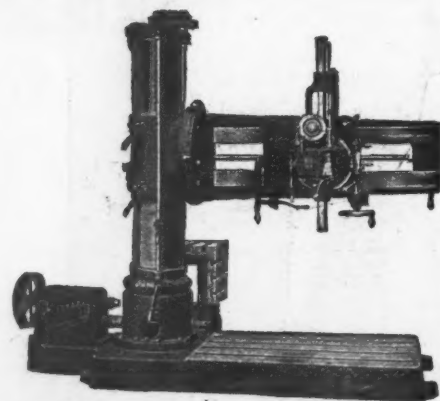
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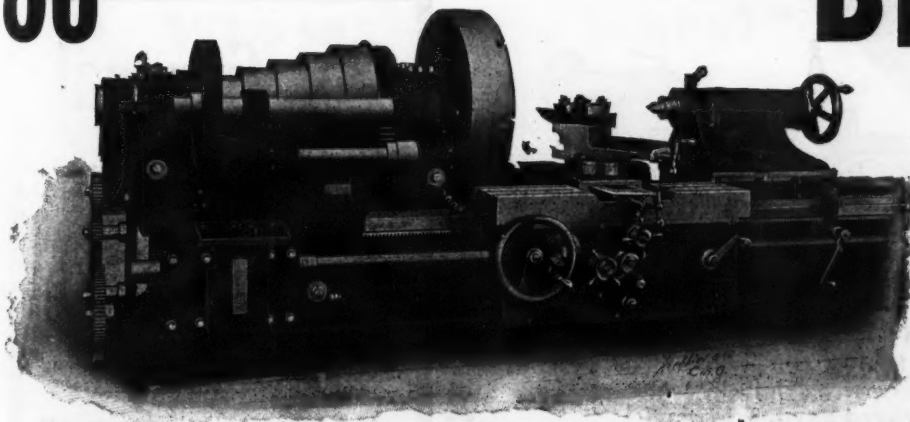
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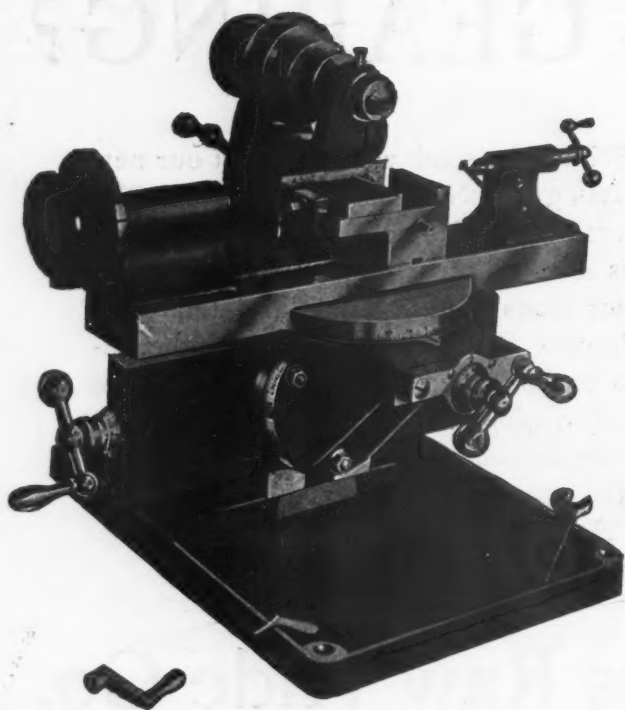
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No. 400

Single Frame Steam Hammer

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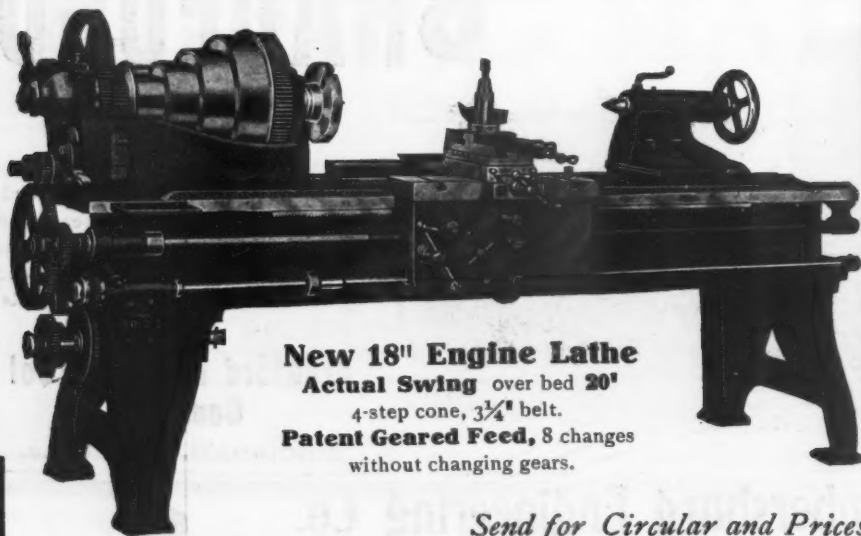
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*Its Collets interchange with those of our No. 5½ Bench Lathe.*

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4-step cone, 3¼" belt.

**Patent Geared Feed, 8 changes**  
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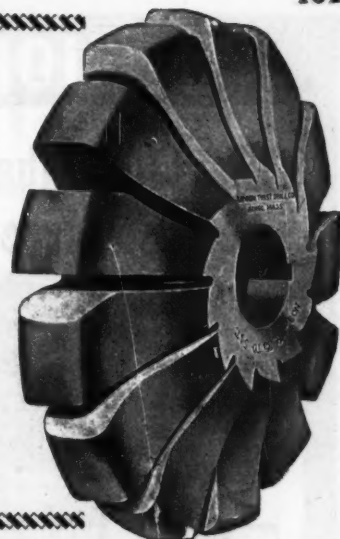
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From Four Spindles."**

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He gets the same number of 1/2" nuts in the same time from six spindles. These were Hard Malleable Iron Nuts, mind you—not common wrought pressed nuts that tap like "old cheese." We back every machine right up with the proof.

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AGENCIES—Marshall Huschardt Machinery Co., Chicago, Motch & Merryweather, Cleveland, Cincinnati, Detroit, A. H. Schutte, New York, Cologne, Brussels, Liege, Paris, Milan, Bilbao, Barcelona. Schuhardt & Schutte, New York, Berlin, Vienna, Stockholm, St. Petersburg, London and Shanghai. C. W. Burton, Griffiths & Co., London, England.

## Who said "Hard Times?"

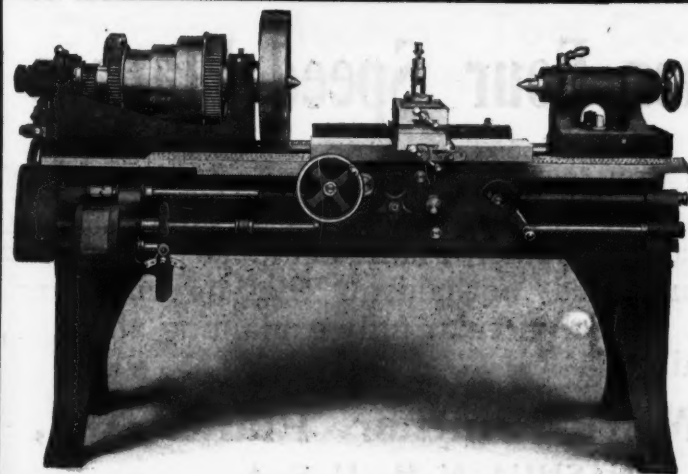
— Why it's nothing but a little scare — A "wonder worker scare" it might be called. It certainly has made concerns "sit up and take notice" of their extravagance in the past and—**that's a good thing.**

Now, take for example how often we have tried to get you to listen to our little tale — tried very hard to tell about the time and money saving qualities of the "UNIVERSAL" for concerns requiring MACHINE SCREWS and SMALL PARTS — How the "UNIVERSAL" will multiply one's product — in a nutshell — how it will make money for you if given a trial.

Yes, we've succeeded in converting quite a few concerns to our method — who never fail to say a good word for the machine that has started them on the money making road, but — we want to talk to you about our wonderful screw machine — if you haven't one.

Just write for full information to Dep't "A."

**UNIVERSAL MACHINE SCREW CO.**  
HARTFORD, CONN., U. S. A.



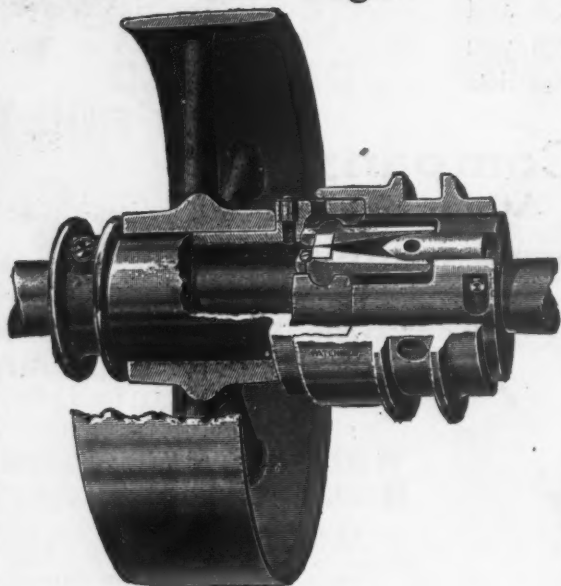
## High-Speed Work Demands Increased Power

The use of **Double Back Gears** and a **Three-Step cone Driving Pulley** on the Whitcomb-Blaisdell Engine Lathe greatly increases the **power** and permits you to "keep pace" with modern shop work. Catalog explains.

**Whitcomb-Blaisdell Machine Tool Co.**  
Worcester, Mass., U. S. A.

# THE JOHNSON FRICTION CLUTCH

**The Clutch that Works Right,  
Because Made Right.**



**Made with a Thorough  
Understanding of Requirements.**

The tendency of the times is to run machine tools at high speeds, and unless a Friction Clutch is well balanced there is sure to be a loss of power through vibration.

The Johnson Friction Clutch saves Power—runs smoothly and easily at any speed, because balanced just right.

It is small, but very powerful—leading tool builders prefer and use it to the exclusion of other Friction Clutches.

It has no protruding parts and every part is interchangeable.

There are no bolts, no nuts, no links—nothing to get loose and cause trouble.

It can be instantly adjusted to any tension with one screw.

All working parts are entirely covered—no dust or dirt can get inside.

*Send for our "RED" Catalogue which gives Sizes,  
Prices and Full Information.*

FOREIGN AGENTS—Efsandem Co., 67a Shaftsbury Ave., London, Eng., for Great Britain. Canadian Fairbanks Co., Montreal, Toronto, Winnipeg and Vancouver, for Canada. H. Glanzer & Perraud, No 1 Avenue de la Republique, Paris, for France. Bieberstein & Goedicke, Ferdinandsstr., No. 25—7 Amerikahaus, Hamburg, for Germany. Wihl. Sonnesohn & Co., Malmo, Sweden, for Norway, Sweden, Finland and Denmark.

**THE CARLYLE JOHNSON MACHINE CO. HARTFORD, CONN.**

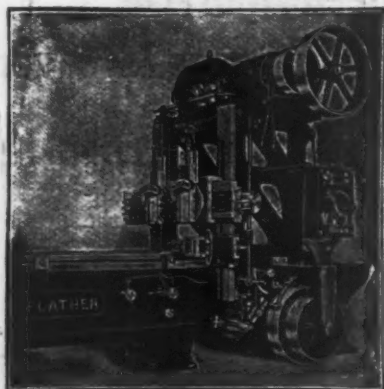
## 60-in. Swing Engine Lathe Triple Geared

Swing over carriage 45 inches. Length of bed 16 feet. Between centers, 8 feet. Beds are wide, deep and strongly braced. We can furnish these Lathes (in even lengths) to order up to 36 feet in length. Every lathe is thoroughly tested before it leaves our works.



**New Haven Mfg. Company, New Haven, Conn., U. S. A.**

30 in. Planer.



Four Speed and Motor Drive.

## Flather Four Speed Planers

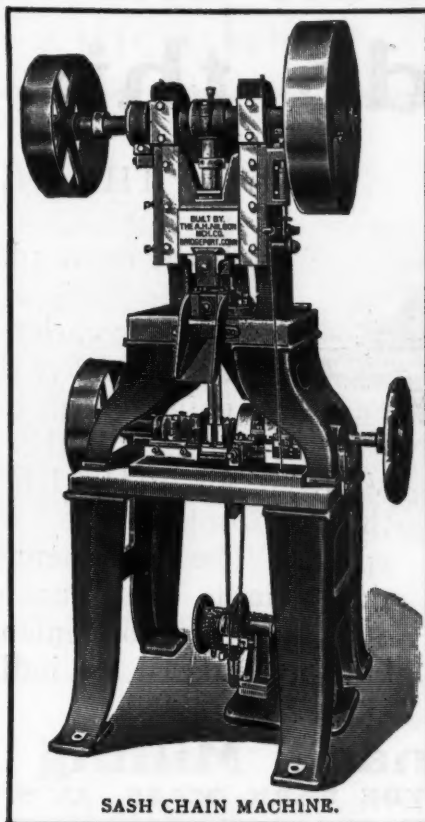
If you want to increase your production we know of no easier way than to install a Flather Planer equipped with Four Speed Mechanism. Let us send you special circular fully explaining all details.

**The Mark Flather Planer Co.,  
NASHUA, N. H., U. S. A.**



# AUTOMATIC MACHINES

We are equipped to design and build special machinery for most any purpose. Send drawings or sample for estimate.



SASH CHAIN MACHINE.

and Special Machinery for Rapid and Cost Saving Work

**DESIGNED and BUILT.**

Special Power Presses, Wire Forming Machinery, Hook and Eye, Sash Chain Machinery.

**The A. H. NILSON MACHINE COMPANY, BRIDGEPORT, CONN. U.S.A.**  
**LET US KNOW YOUR NEEDS.**

## THIS IS NOT AN AUTOMATIC SPRINKLER

The Chicago grinders are fitted with the self-oiling, dirt-proof bearings; oil them about once in three or four months.

The wet grinder has a steady flow of water without the use of pump or lifting pan.

## Chicago Machine Tool Co. CHICAGO, ILL.

Agents,

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Cotton States Belting & Supply Co., Atlanta, Ga.

A. H. Schutte: Cologne, Paris, Milan, Brussels and Barcelona.

Schuchardt & Schutte: Berlin, Vienna, St. Petersburg, Russia, and Shanghai, China

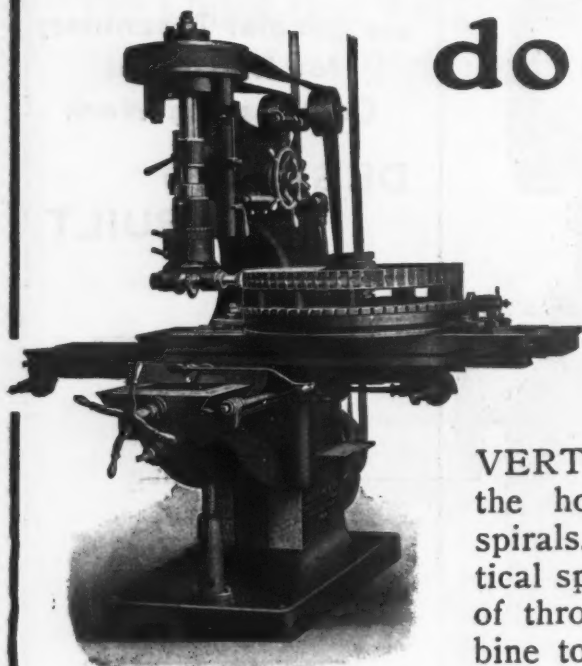
Chas. Churchill & Co.: London, Manchester, Glasgow and Birmingham.

Roku-Roku Shoten, Inc., Kyobashi-ku, Tokio, Japan



Two Sizes 16" and 24"

# How else could you do this Work?



## THE VERTICAL MILLER

is the most adaptable tool to be found in the modern machine shop; it will do a larger variety of work, do it better and do it quicker than any other single machine. The new horizontal attachment adds to the BECKER-BRAINARD

VERTICAL MILLER the essential features of the horizontal type, including the cutting of spirals. The permanency of alignment of the vertical spindle, the staunch design, the great depth of throat, the convenience of operation, all combine to make it an indispensable tool.

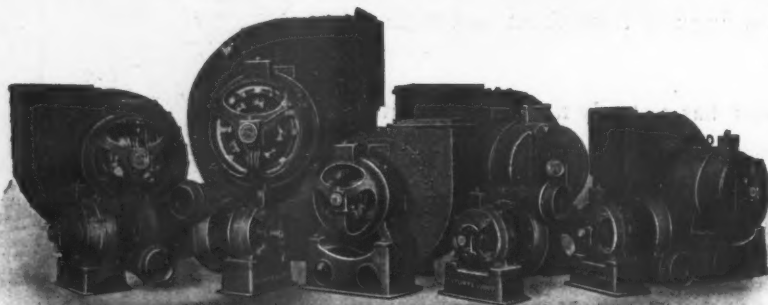
## Becker - Brainard Milling Machine Co.

HYDE PARK, MASS., U. S. A.

AGENTS: — McDowell, Stocker & Co., Chicago, Ill. L. H. Swind, Philadelphia, Pa. A. F. Kummel, Hartford, Conn. Chas. G. Smith & Co., Pittsburgh, Pa. J. L. Osgood, Buffalo, N. Y. A. B. Bowman, St. Louis, Mo. A. R. Williams Machinery Co., Toronto, Ont., and Montreal, Winnipeg and Vancouver, Canada. Ludw. Loewe & Co., Berlin, Germany. Bevan & Edwards Propy. Ltd., Melbourne, Australia. Selig Sonnenthal & Co., London, England. Schuchardt & Schutte, Berlin, Germany; Vienna, Austria; Stockholm, Sweden; St. Petersburg, Russia; Copenhagen, Denmark; Budapest, Hungary; Shanghai, China. A. H. Schutte, Cologne, Germany; Liege, Belgium; Milan, Italy; Barcelona, Spain; Brussels, Belgium; Paris, France; Bilbao, Spain.

# Positive Ventilation

Is Secured By Sturtevant Electric Fans



They can be placed just where wanted with regulating rheostat in a convenient location. Motors of enclosed dust-proof type or semi-enclosed.

## B. F. STURTEVANT CO., Boston, Mass.

General Office and Works, Hyde Park, Mass.

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Designers and Builders of Heating, Ventilating, Drying and Mechanical Draft Apparatus; Fan Blowers and Exhausters, Rotary Blowers and Exhausters; Steam Engines, Electric Motors and Generating Sets; Pneumatic Separators, Fuel Economizers, Forges, Exhaust Heads, Steam Traps, Steam Turbines, Etc.

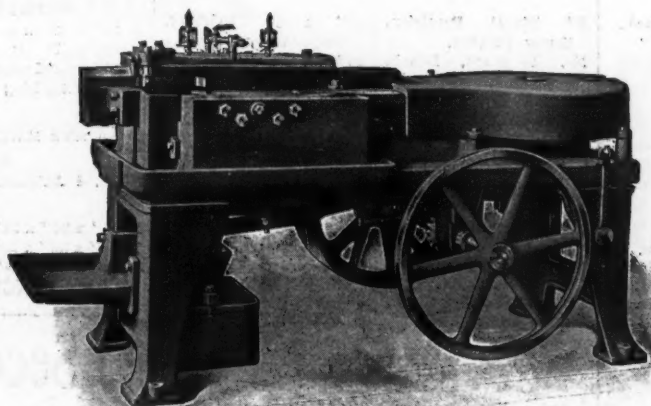


# A THREAD ROLLER WHICH WILL

ROLL  
THREADS

3½"

LONG



No. 4 THREAD ROLLING MACHINE

ON  
SCREWS

¾"

DIAMETER

NEW CATALOGUE D SHOWS FULL LINE

BUILT BY

The E. J. Manville Machine Co.  
WATERBURY, CONN., U. S. A.

## BROWN & SHARPE MFG. CO.

PROVIDENCE, R. I., U. S. A.

Especially Well Equipped for Making  
Small or Light Castings

The ample facilities of the B. & S. Foundry, together with the wide experience of the men in charge, admit of the production of castings of the highest grade. Especially is this true of small castings such as are used in sewing machine and typewriter manufacturing.

*If Specifications Are Submitted, Estimates Will Be  
Furnished at Once*





# We Invite Inspection of the following Boilers, Engines, Heaters, Condensers and Power Plant Equipment Located in our Warehouses.

## EXCEPTIONALLY REASONABLE PRICES.

### Water Tube Boilers

ONE—500 H.P. Seabury marine.  
 ONE—300 H.P. Wickes vert., 144 4" x 20' tubes.  
 ONE—287 H.P. Stirling.  
 TWO—260 H.P. Improved Abendroth & Root, water tube.  
 TWO—250 H.P. Helne water tube.  
 THREE—200 H.P. Geary, 122 4" tubes.  
 ONE—150 H.P. Wickes vert., 84 4" tubes.  
 ONE—160 H.P. Wickes hor., 98 4" x 18' tubes.  
 ONE—150 H.P. Wickes hor., 46 4" and 39 4 1/2" tubes.  
 ONE—150 H.P. B. & W., 84 4" x 16' tubes.  
 ONE—110 H.P. Helne, 53 3 1/2" x 16' tubes.  
 ONE—100 H.P. B. & W., 40 4" x 14' tubes.  
 TWO—75 H.P. Geary hor., 28 4" x 16' tubes.  
 TWO—50 H.P. Helne hor., 23 3 1/2" x 12' tubes.

### Return Tubular Boilers

	H.P. each.
TWO—72" x 20' tubular.....	175
ONE—72" x 18', 74 4" tubes, fore and aft dome.....	150
ONE—72" x 18', 70 4" tubes, 135 lbs. pressure Wickes, NEW.....	150
FIVE—72" x 18', 70 4" tubes, 125 lbs. pressure Wickes, NEW.....	150
ONE—73" x 17' 9", 78 4" tubes, plug hat dome.....	150
TWO—72" x 16', 70 4" tubes, 125 lbs. pressure Wickes, NEW.....	125
TWO—72" x 16', 64 4" tubes.....	125
ONE—72" x 16', 120 3" tubes.....	125
TWO—72" x 15', 120 3" tubes.....	115
ONE—72" x 14' 6", 72 4" tubes, plug hat dome.....	110
ONE—72" x 16', 84 3 1/2" tubes, fore and aft dome.....	125
ONE—72" x 16', 82 3 1/2" tubes, fore and aft dome.....	125
TWO—72" x 16', 74 4" tubes, fore and aft dome.....	125
THREE—66" x 17', 98 3" tubes.....	105
THREE—66" x 16', 100 3" tubes.....	100
ONE—66" x 18', 58 4" tubes.....	115
SIX—66" x 18', 52 4" tubes, plug hat dome.....	115
ONE—66" x 18', 50 4" tubes.....	115
FOUR—66" x 16', 52 4" tubes, 125 lbs. pressure Wickes, NEW.....	100
TWO—66" x 15', 54 4" tubes, plug hat dome.....	95
ONE—66" x 16', 69 4" tubes, plug hat dome.....	100
THREE—60" x 18', 55 4" tubes.....	90
ONE—60" x 14', 44 4" tubes.....	70
ONE—54" x 16', 61 3" tubes, plug hat dome.....	70
ONE—54" x 16', 62 3" tubes.....	70

### Corliss Engines

	H.P.
38" x 72" R. H., modern heavy duty, Corliss, practically NEW.....	1400
38" x 72" L. H., modern heavy duty, Corliss, practically NEW.....	1400
30" x 72" R. H., girder frame, Corliss.....	850
30" x 60" R. H., Rankin & Fritsch.....	700
30" x 48" L. H., heavy duty, St. Louis.....	700
30" x 54" R. H., girder frame, Weisel & Vilter.....	700
30" x 48" R. H., box girder frame, Lane & Bodley.....	625
28" x 60" L. H., girder frame, Harris.....	625
23" x 60" L. H., girder frame, Corliss.....	250
22" x 48" L. H., girder frame, Corliss.....	325
22" x 42" L. H., heavy duty frame, Allis.....	325
22" x 48" L. H., girder frame, Allis.....	350
22" x 42" R. H., Vilter.....	325
20" x 42" L. H., heavy duty frame, Allis.....	270
20" x 40" x 48" L. H., Hamilton tandem.....	500
2—20" x 40" x 48" R. H., Hamilton tandem.....	500
20" x 48" R. H., girder frame.....	300
20" x 42" L. H., girder frame, Wetherill.....	270

19" x 38" x 48" L. H., Allis tandem comp.....	330
18" x 48" L. H., girder frame, Corliss.....	250
18" x 48" L. H., girder frame, Wheelock.....	225
18" x 42" R. H., girder frame, Allis.....	225
18" x 30" R. H., girder frame, Corliss.....	175
16" x 36" R. H., Webster, Camp & Lane.....	160
16" x 30" x 48" cross comp., Hamilton.....	260
16" x 26" x 42" R. H., Allis heavy duty tandem comp.....	250
14" x 48" R. H., girder frame, Harris.....	150
14" x 36" L. H., girder frame, Manitowoc.....	125
14" x 30" R. H., heavy duty Ohio.....	120
14" x 30" L. H., girder frame, Whitehall.....	120
12" x 22" x 42" Atlas tandem compound.....	130

### Automatic Engines

	H.P.
28" x 56" L. H., Buckeye Style "A".....	738
24" x 48" Buckeye, class "A" girder frame.....	450
20" x 24" R. H., heavy tangye frame, McIntosh & Hemphill rolling mill engine.....	300
20" x 36" L. H., girder frame, Buckeye Style "A".....	290
18 1/2" x 18" Arrington & Sims center crank on subbase.....	300
18 1/2" x 18" Ideal center crank.....	250
18" x 27" L. H., tangye frame, Meyers.....	225
18 1/2" x 18" McIntosh & Seymour on subbase.....	300
18" x 48" L. H., girder frame, Wheelock.....	225
18" x 36" L. H., Buckeye, Style "A".....	200
18" x 18" C. C., Arrington & Sims on subbase.....	295
18" x 24" R. H., heavy duty Atlas.....	225
18" x 28" R. H., girder frame, four valve Hill 17" x 15" C. C., Harrisburg Ideal, on subbase.....	200
15" x 42" L. H., Greenwald, four valve.....	204
16" x 18" Atlas, center crank.....	160
16" x 16" Green, center crank, high speed.....	175
16" x 16" Ball, center crank.....	175
15 1/2" x 15" Arrington & Sims, C. C., on subbase.....	196
15" x 36" Putnam, four valve.....	150
15" x 20" L. H., Russell, four valve.....	200
14" x 20" R. H., Porter, on subbase.....	125
14" x 22" x 12" Ball & Wood cross comp.....	200
14" x 15" Taylor-Beck, on subbase.....	125

### Compound Automatic Engines

	H.P.
24" x 46" x 48" Buckeye tandem comp.....	1000
16" x 28" x 16" Erie cross comp., subbase.....	385
16" x 27" x 16" Westinghouse comp.....	325
16" x 27" x 16" Westinghouse comp.....	325
15" x 23" x 17" tandem comp., McIntosh & Seymour.....	100
13" x 23" x 17" McIntosh & Seymour tandem comp.....	200
13" x 22" x 13" Westinghouse comp.....	160
13" x 22" x 13" Westinghouse comp.....	160
13" x 20 1/2" x 12" Arrington & Sims cross comp.....	250
11" x 18" x 16" Ball cross comp.....	150
10" x 18" x 12" Ball tandem comp.....	115
10" x 17" x 16" L. H., Lansing tandem comp., on subbase.....	100

### Feed Water Heaters

2000 H.P. Wickes, with iron pans.	
1500 H.P. Otis, 80 8 1/2" brass tubes.	
1250 H.P. Cochrane.	
1000 H.P. National, with brass coll.	
1000 H.P. Austin open heater.	
800 H.P. National.	
800 H.P. Wainwright, with 163 2" brass tubes.	
750 H.P. Webster vacuum heater.	
600 H.P. Wickes, with iron pans, NEW.	
600 H.P. Erie City, with brass tubes.	
500 H.P. Stillwell lime extractor, heater and filter.	
500 H.P. Webster vacuum, with copper pans.	

500 H.P. Stillwell-Bierce horiz. live steam heater, with iron pans.	
500 H.P. Berryman upright, with brass loops.	
500 H.P. Webster No. 5-L.	
500 H.P. Wickes, with iron pans, NEW.	
400 H.P. Excelsior.	
400 H.P. Webster No. 5-L.	
400 H.P. upright heater, with coll.	
400 H.P. Howe open heater.	
2—400 H.P. Stillwell-Bierce live steam heaters.	
400 H.P. American, No. 16, with copper coll.	
400 H.P. Erie City, with brass tubes.	
400 H.P. with 50 2" copper tubes.	
400 H.P. Howe open heater.	
400 H.P. Wickes, with iron pans, NEW.	
400 H.P. Wainwright, with 70 1 1/2" corrugated copper tubes.	
350 H.P. Patterson-Berryman, with brass coll.	
300 H.P. Wainwright, vertical.	
250 H.P. Austin open heater.	
250 H.P. Wickes, with iron pans.	
200 H.P. Jacobs, with 52 1 1/2" brass tubes.	
150 H.P. Cookson, with iron pans.	
150 H.P. Kroeschell, with brass tubes.	
150 H.P. Reynolds, with iron tubes.	
150 H.P. Wickes, with iron pans, NEW.	
125 H.P. Berryman, with brass coll.	
125 H.P. Berryman.	
125 H.P. Pittsburg open type.	
125 H.P. Funk, with four 6" tubes.	

### Condensers

1400 H.P. Wheeler surface condenser, with combined vacuum and circulating pump, two 12" exhaust inlets.	
16" x 32" x 12" Allis vertical combined wet vacuum pumping engine and circulating pump, 10" suc., 10" dis.	
10" x 14" x 16" Knowles, single jet, 8" exhaust inlet.	
10" x 13" x 12" Deane, single cylinder jet, 8" exhaust inlet.	
10" x 12" x 12" jet.	
8" x 14" x 18" Dean independent air pump and condenser, 12" exhaust inlet.	
8" x 10 1/2" x 10" Stillwell-Bierce duplex jet, 10" exhaust inlet.	
8" x 12" x 12" Deane single, 7" exhaust inlet.	
8" x 12" x 12" Blake single, 8" exhaust inlet.	
6" x 10" x 12" Knowles single, 7" exhaust inlet.	
6" x 8" x 8" Knowles single jet, 5" exhaust inlet.	
6" x 9" x 10" Knowles, single cylinder jet, 6" exhaust inlet.	

### Blowers

90" No. 12 Sturtevant, outlet 36" x 36".	
68" Buffalo, outlet 20" diam.	
63" Boston noiseless, outlet 13" diam.	
60" Ruble, two outlets 9 1/2" diam.	
60" American steel plate, outlet 20" x 20".	
54" Sturtevant No. 8 Monogram, outlet 18 1/2".	
51" Pittsburgh, three-quarter housed.	
2—50" No. 7 Sturtevant Monogram, outlet 16 1/2" diam.	
2—No. 9B Wilbraham-Green Pressure Blowers or Exhausters.	
48" No. 7 Sturtevant Monogram, outlet 16" diam.	
46" No. 6 Sturtevant, outlet 10 1/2" diam.	
43" No. 8 Buffalo, outlet 8 1/2" diam.	
40" No. 5 Sturtevant, outlet 8" dis.	
34" No. 2 positive rotary pressure, vert. type, 10" outlet.	
32" Allan, outlet 8 1/2" x 10".	
30 1/2" No. 10 Buffalo pressure, outlet 12" diam.	
21" No. 1 Sturtevant outlet 4 1/2" diam.	
20" No. 3 Champion, outlet 6" diam.	
16" Boston, outlet 4" diam.	
16" Buffalo, outlet 4" diam.	
13" blower, outlet 3 1/2" diam.	
16" No. 00 Sturtevant, outlet 3 1/2" diam.	

# WICKES BROTHERS

Largest Dealers

Largest Stock

Largest Warehouses

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Michigan.

# NEARLY NEW AND RENEWED

## MACHINE TOOLS

### LATHES.

Reed, 11" x 5', R. & F.  
 Flather, 14" x 6', P. R.  
 American, 14" x 8', C. R.\*  
 Flather, 16" x 6', C. R. & T. A.  
 Le Blond, 18" x 8', turret on carriage.\*  
 Draper, 28" x 11', C. R. & T. A.  
 Flather, 30" x 12', C. R.  
 Niles Pulley Lathe, 50".

### DRILLS.

28" Barnes Upright Drill.\*  
 5-Spindle W. & R. Sensitive Drill.  
 4-Spindle Foote-Burt Gang Drill.  
 Baush 8-Spindle Multiple Drill.\*  
 Western 6' Universal radial.\*  
 5' Niles Plain Radial Drill.

### PLANERS.

Sellers, 20" x 20" x 4½'.  
 New Haven, 22" x 22" x 4'.  
 Pond, 24" x 24" x 6'.  
 Whitcomb, 30" x 30" x 8'.\*  
 Wheeler, 32" x 32" x 8', 2 hds.  
 Betts, 39" x 32" x 16'.  
 Flather, 40" x 36" x 10', 2 hds.  
 Powell, 48" x 48" x 12', 2 hds.\*  
 Sellers 64" x 64" x 16', 4 heads.

### SCREW MACHINES.

B. & O. Screw Machine, No. 4.  
 B. & O. Screw Machine, No. 5½.\*  
 P. & W. Screw Machine No. 1.  
 P. & W. Screw Machine No. 2.  
 Jones & Lamson, 2" x 24".\*  
 Cleveland Aut. Screw Machine, No. 3.\*  
 American Turret Lathe, 24" x 10'.

### MISCELLANEOUS.

Rogers 32" Boring Mill.  
 Norton, 10" x 72", Plain Grinder.  
 Norton, 14" x 72", Plain Grinder.  
 G. & E. 24" Automatic Gear Cutter.  
 Brainard 36" Automatic Gear Cutter.  
 No. 6 Hilles & Jones Plate Planer.  
 H. & J. Angle Iron Cutter, 6" x 6".  
 10" New Haven Slotter.

### MILLING MACHINES.

Milwaukee No. 2 plain Miller.\*  
 Brown & Sharpe No. 1 plain Miller.  
 Vanderbeek No. D plain Miller.  
 Pedrick & Ayer No. 3 plain Miller.  
 Brainard Horizontal Miller, No. 6.  
 Becker-Brainard Column Miller, No. 5 B.  
 Brainard 96" Hor. Miller, with side head  
 and vert. milling attach., distance  
 between uprights 4' 8".

## HILL, CLARKE & CO., Inc.

The Machinery Merchants

136 Cedar Street, New York.  
 512 Arch Street, Philadelphia, Pa.

156 Oliver Street, Boston, Mass.

14 South Canal St., Chicago, Ill.  
 711 St. Claire Ave., Cleveland, Ohio.

# We Are Now Located In Our New Store AT THE CORNER OF RANDOLPH and JEFFERSON STS.

### PLANERS

1—48 x 48 x 20 Flather, two heads on  
 rail, one side head; fine order.  
 1—36 x 36 x 12 Belmer, two heads on  
 rail; A-1 condition.  
 1—30" x 30" x 10' Deitrick & Harvey  
 Open Side; excellent condition.  
 1—32" x 32" x 14' Flather Standard and  
 Open Side, with open side attach-  
 ment, auxiliary table, two heads on  
 rail; splendid working order.  
 1—24" x 24" x 6' American Tool Wks.;  
 equal to new.  
 1—26" x 26" x 8' Lodge & Davis; good or-  
 der.  
 1—24" x 24" x 8' Fitchburg.  
 1—24" x 24" x 5' Powell.  
 1—20" x 20" x 6' Pratt & Whitney; A-1  
 condition.  
 1—20" x 20" x 4' New Haven.  
 1—17" x 17" x 4' Whitcomb.  
 1—16" x 16" x 4' Hendy.

### SHAPERS

1—24" Cincinnati B. G. Crank; good as  
 new.  
 1—20" Kelly B. G. Crank; good as new.  
 1—34" Walcott Triple Geared.

### MILLING MACHINES

1—No. 3 Brown & Sharpe Universal.  
 1—No. 1 Brown & Sharpe Universal.  
 1—No. 2 Garvin Universal.  
 1—No. 2 Putnam Universal.  
 1—No. 0 Brown & Sharpe Plain.  
 1—No. 3 Chicago Hand and Power, with  
 vertical attachment.  
 1—No. 4 Garvin Plain B. G. old style—  
 cheap.  
 1—No. 3 Cincinnati Plain B. G. Miller.  
 1—Whitney Hand Miller—equal to new.  
 1—No. 1 Pratt & Whitney Hand Miller.

### BORING MILLS

1—42" Bullard, two heads.  
 1—30" Gisholt—good as new.  
 1—No. 5 Binsse Horizontal, with power  
 cross feed to table.  
 1—No. 3 Meadville Horizontal Cylinder  
 Boring Machine, with 6" bar and  
 special long table.

### TURRET MACHINES

1—21" Gisholt.  
 1—2 x 24 Jones & Lamson—good as new.  
 1—24" Davis Machine Co.  
 1—38" Special for facing attachment.  
 7—Turret Lathes—Smaller sizes—Vari-  
 ous makes.

### LATHES

We have a well assorted line of  
 Lathes, ranging from 10" to 50" swing,  
 all lengths of bed. What are your re-  
 quirements?

### OTHER LATHES

1—30" x 32' Pond Mach. Tool Co. Shaft-  
 ing Lathe, powerfully geared—has  
 tail stock drive.  
 1—62" Lodge & Shipley Pulley Lathe—  
 3 tool rests.  
 1—42" Shellenbach Pulley Lathe—2 tool  
 rests.  
 1—30" Shellenbach Pulley Lathe—2 tool  
 rests.  
 1—20" Streit Pulley Lathe—2 tool rests;  
 good as new.  
 This list only comprises a part of our  
 stock. Send us your inquiry.

# THE H. A. STOCKER MACHINERY CO.

85 to 91 West Randolph Street, - - - - - Chicago, Ills.



# FOR SALE

## Lumber and Building Material, Rebuilt Boilers, Engines and Machinery

**The Chicago House Wrecking Company**, takes first position in the field of American enterprises. No concern on earth has been engaged in such gigantic operations as has this Company. Each of the mammoth Expositions and World's Fairs since 1893 has been purchased outright and dismantled by this Company. From this one source alone over **ninety million dollars worth of building materials** and supplies have been disposed of by us. We have sold **millions upon millions** of feet of lumber and thousands of customers throughout this great country can tell of the money they saved by dealing with us.

The first of the year we commenced operations by purchasing outright, immense quantities of **brand new, high grade Lumber**. We purchased over **fifty million feet** of the best Southern Pine Lumber. Thus our stock to-day comprises absolutely everything needed for the construction of a building of any kind and for any purpose. Our supplies in this line consist of first-class, brand new material. It is a matter of some difficulty for us to fully impress on you that the majority of the goods we offer for sale consist of new and **not second-hand materials**.

### LUMBER FOR CRATING PURPOSES

We can furnish Lumber for crating purposes at prices ranging from \$5.00 to \$8.00 per 1000. If you are a manufacturer and a large user of Lumber for such purposes, give us an idea of your requirements and let us make you an estimate. We are prepared to make contracts to cover a period of time for material you may require in this line. We will furnish cut to order or in random lengths.

### SEND US YOUR LUMBER BILL FOR OUR LOW ESTIMATE

We want you to send us your complete Building List for our prices. Have your carpenter or contractor make up a bill of just what you need or make it up yourself. Send to us and ask us to name you a price. We will estimate on good goods, just as good as you can buy from any one on earth, and our prices will be so low as to surely warrant your placing your business with us. Send us your Lumber and Building List for our estimate. Act to-day.

### OUR STOCK ON HAND

50,000,000 feet of brand new Lumber.  
Yellow Pine Timbers.  
Flooring.  
Sheathing Boards.  
Tongue and Grooved Sheathing.  
Scantling, Studding and Joists.  
Dimensions and Planking.  
Drop Siding.  
Fencing.  
Beveled Cribbing.  
Ship Lap.  
Maple Flooring.  
Factory Flooring.  
Oak Flooring.  
Finishing Lumber.  
White Pine Lumber.

**Be sure and send for our Estimate**

### STRUCTURAL IRON

2—Steel buildings, 50 x 60 x 15 ft. high. Also other buildings which we are now wrecking. All at very low prices. Our Structural Iron News will keep you advised regarding our operations. We will be glad to put you on our mailing list. Also Beams, Channels, Angles, &c. We have facilities for making Structural Shapes of every description to order. Send us your blue print. Do you receive our Structural Iron News regularly? It's full of bargains and will keep you advised about our operations. Just drop a postal, and a sample copy will be mailed you.

### RAILS

30 Miles of 7 in. and 4½ in. Girder Rail, in good condition. Suitable for relaying purposes or structural work. Special price for large quantities. Just the thing for concrete or foundation work.  
600 tons 8, 12 and 16 lb. New and Relaying Rail.

### STEEL CABLE

100,000 ft. of 1 5-16 in. Steel Cable, with hemp center, all in first-class condition. Can be used for hoisting and general purposes. Will send samples.

### HEATING SUPPLIES

700 Cast Iron Radiators, suitable for factory or office. Box Coils, Pipe Radiators, Valves, etc.

If you intend to install a new heating plant or repair your old one, send us a list of material or blue print for our estimate. You will be surprised at the saving.

### PLUMBING SUPPLIES

Cast Iron White Enameled Bath Tubs at .....\$10.00  
Factory Lavatories at..... 3.50  
Factory Sinks at..... 1.00  
Factory Closet Outfits at lowest prices.

Get our sanitary engineer's advice on installing plumbing outfits for home, shop and factory.

### VALVES AND FITTINGS

Valves and Fittings from 8 in. to 24 in. Every style, including Gate, Globe and Angle Valves. Also complete line of Elbows, Tees and Crosses. Our special list on these goods is handy for reference. Just drop a postal if interested.

### IRON PIPE

50,000 ft. 1" Standard Pipe.  
30,000 ft. 1¼" Standard Pipe.  
20,000 ft. 1½" Standard Pipe.  
30,000 ft. 2" Standard Pipe.  
2,500 ft. 8" Standard Pipe.  
2,000 ft. 10" Standard Pipe.  
4,000 ft. 12" Standard Pipe.  
35,000 ft. 1¼" Casing.  
30,000 ft. 2¾" Casing.  
40,000 ft. 3¼" Casing.  
80,000 ft. 3¾" Casing.  
8,000 ft. 5¾" Casing.  
9,000 ft. 6¼" Casing.  
1,000 ft. 6¾" Casing.  
1,250 ft. 8¼" Casing.  
1,500 ft. Riveted Steel Pipe, 24" to 72" diameter.  
10,000 ft. 8" Cast Iron Pipe.  
300 ft. 24" Cast Iron Pipe.  
175 ft. 48" Cast Iron Pipe.

### ELECTRICAL SUPPLIES

Brand new Incandescent Lamps, 8 C. P., 9c. each; 16 C. P., 11c. each.  
Copper Wire. Porcelain Knobs, Cleats, Cut-Outs, etc.

We can always make prompt shipments. Have you had our special list? Better send for same. It will save you many a dollar.

### HOISTING RIGS

1—6¼ x 8 D. C., D. D., New Stroudsburg, with Boller.  
1—7 x 10 D. C., D. D., New Stroudsburg, with Boller.  
2—8¼ x 12 D. C., D. D., Webster, Camp & Lane.  
1—12 x 16 D. C., D. D., Lidgerwood.  
1—7 x 110 D. C., D. D., Mundy Engine and Boller.

### REBUILT ENGINES

1—16 x 36 Welsch-Vilter Corliss Engine.  
1—18 x 42 Left Hand Hamilton Corliss Engine.  
1—28 x 42 Right Hand Bates Corliss Engine.  
1—20 x 48 Lane & Bodley Corliss Engine.  
1—16 x 36 Bullock Corliss Engine, direct connected to one 10 x 36 Ingersoll-Sargent Air Compressor.  
1—36 x 72 Single Cylinder, Single Expansion "Green Wheelock" Engine, 1300 H.P.  
1—28 x 60 Hamilton Corliss.  
3—30 x 60 Single Cylinder, Single Expansion "Wheelock" Engines, 800 H.P., 2 with 75-ton and 2 with 45-ton wheels.  
3—24 x 48 Single Cylinder, Single Expansion "Wheelock," 450 H.P.  
1—38 x 72 Single Cylinder, Single Expansion "Wheelock," 1600 H.P., with 65-ton flywheel.

### REBUILT ENGINES—Continued

2—16 x 16 Erie Ball.  
25—Automatic Engines, from 50 to 200 H.P.  
42—Slide Valve Engines, from 10 to 150 H.P.  
1—16 x 18 Center Crank Automatic Atlas.  
2—18 x 24 Right Hand Automatic Atlas.  
1—18 x 24 Slide Valve Atlas.  
1—14 x 20 Automatic Atlas.  
1—14 x 20 Slide Valve Atlas.

### SPECIAL RUBBER BELT SALE

We have just purchased three carloads of the highest grade Rubber Belts manufactured and intend to make this our greatest remnant sale. The greatest opportunity ever offered for buyers of belting. In this lot we offer 800 items in high grade Rubber Belts, at prices from 25 to 50 per cent. below regular. This reduction is not made because of defects in the Belts. We guarantee them the highest grade manufactured. One of Boston's leading manufacturers turned them out, and the only reason why they came into our possession is because they are not in full rolls.

If you are interested, write for special circular and price list. Be sure and write at once, as we do not often have such a splendid list to offer in one lot.

### HORIZONTAL BOILERS

8—72 x 20 Horizontal Tubular Boilers. Triple riveted, high pressure, domeless type, containing 50 4½" tubes, with 20 McGregor braces in each end. Shells are 7-16 in. and heads 9-16 in. thick; diameter 72 in., length 20 ft. These were taken from the Illinois Steel Company's plant at So. Chicago and were operated under 125-lb. pressure. Special low price for quick delivery.  
6—60 x 16 Horizontal Boilers.  
6—60 x 18 Horizontal Boilers.  
12—62 x 18 Horizontal Boilers.  
12—66 x 18 Horizontal Boilers.  
8—72 x 16 Horizontal Boilers.  
2—72 x 18 Triple Riveted Batt Strapped Boilers.  
2—54 x 16 Boilers.

### SMOKE STACKS

50 Good Steel Smoke Stacks, sizes 12 to 72 in.; perfect condition; can save you 50 per cent. and make quick delivery.

### STEEL STORAGE TANKS

Capacity 4000 to 8000 gallons. These tanks were used only a short time in railroad service, and are of very heavy construction, made of ¼" steel, with 5-16" heads; domes are in proportion to size of tank and fitted with 15" screwed manhole. Tanks will be rigidly inspected and painted before shipment. Sold with our guarantee; absolutely tight for storage purposes. Prompt shipment can be made from points east, west and south.

Complete line of smaller tanks for pressure or storage.

### AIR COMPRESSORS Steam Driven

1—10 x 10 x 12 Fisher.  
1—10 x 10 x 10 Wilson & Snyder.  
1—14 x 14 x 18 Fisher.  
1—16 x 16 x 20 Fisher.

### PUMPS

3—Centrifugal Pumps, 24-in.; two to three million gallons capacity.  
Complete line of Pumps up to 18 in.

### Ask for Our Catalog No. 78

The wonderful bargain book. Full of valuable information for everyone, especially the man who pays the bills.

**CHICAGO HOUSE WRECKING CO., - Chicago, Ill.**

## Used Machinery

Which Will Please the Most Particular Persons, is Worthy of Your Best Attention.

### ENGINE LATHES.

12" x 5' Reed, C. Rest, P. C. Feed, H. Spindle.  
12" x 6' Le Blond, C. Rest, P. C. Feed.  
12" x 5' Seneca Falls, C. R. P. C. F.  
14" x 6' Le Blond, C. R., quick change.  
14" x 6' Lodge & Shipley, C. Rest, P. C. Feed, H. S., Quick Change.  
14" x 6' Prentiss Cyclone, C. R. P. C. F.  
16" x 6' Prentiss Cyclone, C. R. P. C. F.  
18" x 8' Pratt & Whitney.  
17" x 8' Greaves, C. R. P. C. F., taper att. and pan.  
17" x 6' Hamilton, C. R. P. C. F.  
20" x 12' Bullard, C. Rest, P. C. Feed and Turret, H. S.  
21" x 8' Lodge & Davis, C. R. P. C. F.  
24" x 14' Lodge & Shipley, Triple Geared, H. S.  
24" x 12' Reed, High Speed Lathe.  
21" x 10' and 33" x 26' Putnam, C. Rest, P. C. Feed.  
35" x 12' Pond, C. R. P. C. F.  
48" x 17' Pratt & Whitney, C. R. P. C. F.  
16" x 10' Automatic Threading.  
26" x 44" x 18' McCabe, Double Spindle, C. R., P. C. F., H. S.

### PULLEY LATHES.

26" and 50" Stevens, and  
60" x 10' New Haven.

### MILLERS.

No. 0 Pratt & Whitney Power.  
No. 1 and No. 2 Pratt & Whitney, Hand.  
No. 2 Kempsmith, Plain.  
No. 14 Garvin, Plain, all Geared Feed.  
No. 3 Brown & Sharpe, Plain.  
No. 3 Cincinnati Plain.  
No. 4 Brown & Sharpe Plain.  
No. 1 1/2 Cincinnati Universal.  
No. 1 and 2 Brown & Sharpe Universals.  
No. 22 Garvin Vertical.  
No. 5 Brainard Vertical, with Rotary.

### DRILLS.

4 Spindle Foote Burt's Sensitive.  
14" x 2 and 3 Spindle, Sigourney.  
20" Aurora, Power Feed.  
28" Snyder, Sliding Head, B. G. and P. F.  
31" Barnes ditto.  
24" Gang, Radial.  
4", 5" and 6" Bickford Plain Radials.  
4" and 5" Bickford Universal Radials.

### SHAPERS.

14" Steptoe, Plain.  
18" Prentiss, Crank.  
48" Morton, Draw Stroke.

### BORING MILLS.

34" Colburn, Vertical, Turret Head.  
No. 1-4" Bar, Barret Horizontal.  
51" Niles, Vertical, Two Heads.  
36" Brown & Sharpe Vertical Chucking Machine.

### GEAR CUTTERS.

30"-33" and 50" Gould & Eberhardt.  
18" and 26" Brown & Sharpe.

### PRESSES.

Nos. 18 and 19 1/2 Bliss Inclined.  
No. 4 V. & O. Geared.  
No. 5 Bliss, Extra Heavy Double Crank.  
No. 6 Rudolph & Krummel extra heavy, geared.

### PLANERS.

22" x 22" x 5' Farrell, One Head, All Feeds.  
26" x 24" x 6' Ferris & Miles, ditto.  
30" x 30" x 14' Gray, Two Heads.  
30" x 30" x 14' Cincinnati, double head.  
32" x 32" x 8' Smith Slik, One Head.  
36" x 36" x 12' Bement, Miles, Two Heads.  
50" x 36" x 14' L. W. Pond, Two Heads.  
60" x 60" x 22' Hepworth, One Head.

### SCREW MACHINES and MONITORS.

No. 1 Warner & Swasey, W. F., almost new.  
1/2" Warner & Swasey, Wire Feed.  
1 1/2" Warner & Swasey, W. F., P. F.  
2" x 24" Jones & Lamson, Flat Turret.  
No. 6 Brown & Sharpe Monitor.  
24" and 27" American Turret Lathes.  
21" Gisholt Turret Lathe.

### HAMMERS.

100-lb., 800-lb. and 1200-lb. Friction Board Drop.  
1250-lb. Morgan, Steam.  
150-lb. Bradley, Vertical Helve.  
200-lb. Mossburg & Granville, Drop.

### MISCELLANEOUS.

No. 1 Cincinnati Cutter Grinder.  
24" Morton Keyseater.  
2" to 6" Cutting Off Machines.  
10" to 13" Crank Slotters.  
5/8" to 2 1/2" Automatic Screw Machines.  
42" Gap Punch and Shear.  
1 1/2" Spencer Double End Automatic Screw Machine.  
79" and 90" Driving Wheel Lathe.

A full line of new machinery of the highest grade always kept in stock.

**Prentiss Tool & Supply Co.**

New York Boston Buffalo Syracuse

## Second-Hand MACHINERY

Condition A1

### LOT A-3374.

Drill, 36" Morris Pl. Radial.  
Shaper, 24" Lodge & Davis, with vise and cs. Cutter & Reamer Grinder, Cln., with attachs.  
Lathe, 16" x 8' Robbins, taper attach and chuck.  
Lathe, 20" x 12' Robbins, reg. fixtures and chuck.  
Lathe, 24" x 12' Sherman, complete.

### LOT A-3373.

Drill, 25" Lodge & Davis, sl. hd., bk. gd. aut. stop.  
Drill, Radial McNall 52" circle.

### LOT A-3372.

Shaper, 14" Jungst, with vise and cs.  
Drill, 36" Putnam, sta. hd., p. fd.  
Lathe, 26" x 16' Putnam, comp. rst.  
Lathe, 24" x 18' L. W. Pond, comp. rst.

### LOT A-3371.

Lathe, 14" x 8' Reed, R. & F. rst.  
Lathe, 20" x 8' Sherman, reg. fixtures.  
Lathe, 21" x 8' Fifield, comp. rst.  
Drill, 24" sld. hd., bk. gd., aut. stop.  
Drill, 20" Barnes, sq. base, W. & L. fd.  
Planer, 26 x 26 x 6' Wheeler, with cs.  
Planer, 22 x 22 x 4' Wheeler, with cs.  
Planer, 20 x 20 x 4' Wheeler, with cs.  
Vises, 40 miscellaneous Blacksmiths', 4"-6 1/2" jaws.

In writing refer to Lot Number; description and price on application.

### C. C. WORMER MACHINERY CO.

85-89 Woodbridge St., Detroit, Mich.

### GOOD SECOND HAND ROLLS, SHEARS PUNCHES AND MACHINE TOOLS.

6', 8', 10' and 18' Bending Rolls.  
3' to 6' Light and Heavy Sheet Forming Rolls.  
3' and 8' Squaring Shears.  
Power Punch to punch 1 1/2" x 1 1/2"  
Lever Shears and Punches.  
Roll Grinding and Corrugating Machines for four mill rolls.  
Gear Planer for spur or bevel gear.  
Four-Spindle Nut Tapper.  
Line Shafting, Pulleys, Hangers, Blowers and Anvils. BERTSCH & CO. Cambridge City, Ind.

## 18-Foot PULLEY FOR SALE

38" face, 11" bore, weight 33,000 lbs.

W. L. SARGENT, Fitchburg, Mass.

### Tubular and Water Tube Boilers

1-35-H. P. tubular boiler.  
1-70-H. P. tubular boiler.  
3-80-H. P. tubular boilers.  
1-115-H. P. water tube boiler.  
2-100-H. P. water tube boilers.  
2-100-H. P. tubular boilers.  
1-125-H. P. tubular boiler.  
1-150-H. P. tubular boiler.  
Smoke stacks. Boiler repairs. Boilers for rent.  
All the above second-hand bargains.  
R. MUNROE & SONS MFG. CORPORATION,  
Twenty-third St., Pittsburgh, Pa.

## 125 H. P. Gas Engine

REBUILT AND NOW IN NUMBER ONE CONDITION

Price Very Low

EDGAR M. MOORE & Co., Farmers Bank, Pittsburgh.

## WANTED

Second-hand Screw Machines.  
1 1/2" Cleveland Plain Automatic.  
No. 4 and 4 1/2" Bardons & Oliver on Column. Wire Feed Friction Head and Automatic Chuck.

Address "T. I. R." care The Iron Age, New York.

## Summer Complaint

in the machinery trade is usually smaller sales. We have made the price on the following list to correspond with the summer conditions. Better call and see the machines or write for quotations.

1-22" Bogert Crank Axle Lathe, new.

1-60" Davis Pulley Lathe, new.

1-1" Burdick Bolt Header for square and hexagon heads, excellent condition.

1-300 lb. M. & G. Automatic Drop Hammer, practically new.

2-No. 5 Bardons & Oliver Screw Machines, geared friction head and P. F., rebuilt.

1-2" x 24" Jones & Lamson Turret Lathe with outfit "D," rebuilt.

1-No. 2 Cincinnati Plain Milling Machine, rebuilt.

2-No. 5 Pearson Screw Machines, excellent condition.

1-16" x 8' Lodge & Shipley Engine Lathe, rebuilt.

1-36" - 40" Brown & Sharpe Vertical Turret Lathe, excellent condition.

1-30" Colburn Vertical Boring Mill, new.

1-26" - 48" McCabe Double Spindle Lathe with raising blocks to swing 62", nearly new.

2-16" Milwaukee Shapers, B. G.

1-16" Queen City Shaper, B. G.

1-20" Queen City Shaper, B. G.

1-24" Queen City Shaper, B. G.

3-24" Milwaukee Shapers, B. G.

1-No. 4 R. & K. Power Press.

Send for the latest issue of Machinery Buyers' Guide

**McDowell, Stocker & Co.**

16-18-20 So. Jefferson St.

Milwaukee Office, Rooms 417-418 Wells Bldg.

Grand Rapids, 111 Michigan Trust Bldg.

Denver Branch, P. O. Box No. 3.



# STOCK PUNCHES AND SHEARS, BENDING ROLLS, ETC.

We have about fifty machines for punching, shearing, bending and straightening of plates, bars and structural shapes in stock or in course of construction.

**Prices Are Down Low!**  
**Send us your specifications**

**HILLES & JONES  
COMPANY,**  
Wilmington, Delaware.

## Second Hand MACHINERY PUNCHES AND SHEARS.

2726—Williams - White 130F—Cleveland Bevel  
Co. No. 17 Double End Shear.  
Punch and Shear. 2725—Bliss No. 17 Punch Press.

### PLANERS.

2637—20" x 20" x 5' 2636—24" x 24" x 5' Ames, One Head. Ames, One Head.  
2538—30" x 30" x 7' 2700—32" x 32" x 8' New Haven, One Pond, One Head.  
2639—36" x 36" x 12' 2578—40" x 40" x 12' Gleason, One Head. New Haven, Two Heads.

### LATHES.

2584—16" x 6' Blaisdell, 2734—18" x 12' Blaisdell B'k. G'd., Taper At- dell B'k. G'd.  
tach. 2740—32" x 23' New Haven B'k. G'd. C. R. Au. F. 2741—10" x 4' Mach. Co. Speed  
2735—27" x 18' Fifeild 2704—No. 1 Milwaukee versal. Universal.  
2640—Lodge & Davis 2708—Garvin No. 2 Plain, B'k. G'd. Hand.

### MILLING MACHINES.

2713—Hendey No. 2 Un- 2704—No. 1 Milwaukee versal. Universal.  
2640—Lodge & Davis 2708—Garvin No. 2 Plain, B'k. G'd. Hand.

### DRILLS.

2582—4' Bickford Round 144F—6' Prentice Gear Column, Plain Radial, Speed Change Radial.  
2732—42" Blaisdell Up- 2718—20" Prentice Up- right B'k. G'd., Slid- right W. & L. Feed.  
ing Head. 125F—Four Spindle Bement-Miles.

### HAMMERS.

2620—800 lb. American Friction, Board Lift, Single Frame Standard Drop.  
Guido, Steam. 2727—40 lb. Bradley  
2736—600 lb. Pittsburg Helve  
Dbl. Leg Steam. 118F—25 lb. Bradley  
2728—1000 lb. Merrill, Helve

### MISCELLANEOUS.

2723—1" Acme Dbl. 2590—Espan-Lucas Bar Bolt Cutter. Cold Saw.  
2681—24" Hendey Friction Driven Shaper.

Second Hand Department.

**BAIRD MACHINERY COMPANY,**  
3rd and Smallman Sts., Pittsburg, Pa.

## Spiral Pipe Bargains

We offer the following second-hand Galvanized Spiral Riveted Flanged Pipe:  
1400 ft. 12".  
500 ft. 8".  
500 ft. 4".  
1200 ft. 3".  
3000 ft. 8", 10", & 12" Wrought Screw Pipe. Prices on application.

**MARINE METAL & SUPPLY CO.,**  
167 South St., N. Y.  
137-143 15th St., Jersey City, N. J.

## A. D. White Machinery Co.

### BARGAINS

16" x 6' Flatther lathe, P. R., hol. spindle.  
26" x 14' Fifeild lathe, Cp. R.  
24" x 12' Putnam, Cp. R. and chuck.  
2—16" x 16' Flatther, Cp. R. and chucks.  
2—16" x 8' Draper, Cp. R. and chucks.  
1—18" x 10' Draper.  
1—18" x 8' Rahn, Cp. R. and taper with ck.  
24" x 14' Fay & Scott, Cp. R.  
36" x 28' Putnam, triple gd., Cp. R.  
8' x 10' Robinson brakes.  
32" Cincinnati, sld. hd., B. G. drill.  
24" x 24" x 6' Lodge & Davis planer, single hd.  
30" x 30" x 9' 6" Sellers planer, single hd.  
36" x 34" x 8' New York planer, single hd.  
36" x 36" x 12' Cincinnati planer, dbl. hd.  
No. 1 Davis & Egan plain miller, B. G.  
1—No. 2 Brown & Sharpe millers, B. Grd.  
No. 2 Cincinnati universal, B. Grd.  
No. 3 1/2 Fox plain miller, plain hd.  
No. 6 Brown & Sharpe pl. miller, pl. hd.  
No. 1 and No. 3 B. & S. universal millers.  
No. 18 and 19 Bliss inclinable presses.  
No. 3 R. & K. dbl. cr. press, not grd.  
No. 1 Bliss dbl. cr. press, not grd.  
No. 2 Consolidated inclinable press.  
14" stroke tube drawing press.  
No. 95 Bliss str. sided dbl. cr. press, not grd.  
No. 20 Wold O. B. press.  
Nos. 0 to 5 R. & K. inclinable presses.  
16" Bausch heavy crank shaper.  
16" Eberhardt Bros. B. G. crank shaper.  
9' x 24" Sellers traveling head shaper.  
2" Cleveland aut. screw machine.  
3—No. 2 and No. 00 Brown & Sharpe aut. screw machines.  
No. 3 Garvin turret lathe, B. Grd.  
3/4" Cleveland semi-aut. sc. mach.  
2—No. 5 Pearson fr. grd., sc. machs., 1 1/4" cap.  
3—Car wheel borers, 36", 42", 48" Bement.  
600-lb. Bement single frame steam hammer.  
4—2" Bignall & Keeler, P. D. Q. pipe machs.  
12" slotter.  
We want Slab Miller to take work 36" wide, 60" long, 12" high.

We have several hundred other used machines and a complete line of new machines in stock. Write us on anything you need.

19-21-23 So. Jefferson St., CHICAGO, ILL.

## Second-Hand Tools

16" x 6' L. & D. Lathe, turret on carriage.  
18" x 8' American Combination Lathe and Screw Machine.  
Spindle Boring Lathe.  
No. 6 American Screw Machine.  
McKinnon Keyseater, 2 ft. capacity.  
No. 1 Diamond Bench Grinder, 10" wheel.  
Builders' Iron Foundry No. 12 Dry Emery Wheel Grinder, with countershaft.  
30" x 5' Grindstone Frame.  
4" Whiton Two-Spindle Centering Machine.  
No. 7 Buffalo Blower, 36" diameter.  
Diamond Hand Wheel Turning Attachment, for Milling Machine.  
New Brown & Sharpe Hand Milling Attachment, for Milling Machine.

**The American Tool Works Company**  
Cincinnati, U. S. A.

## FOR SALE

## SHOVEL MACHINERY

Complete equipment for making Plain Back, Hollow Back, and Riveted Back Shovels, Spades and Scoops, including Dies, Cutters, Punches, Molds, Gauges, Small Tools, Patterns, &c. All in good order. Address "SHOVELS," care *The Iron Age*, 1515 Real Estate Trust Building, Philadelphia, Pa.

## FOR SALE BOILERS

Two 112 horse power Heine Water Tube Boilers—good for 125 lbs. working pressure—excellent condition.

I am replacing same with larger boilers. Ready for delivery about August 1st  
**CHARLES E. TUDOR,**  
715 E. 3d St., Cincinnati, Ohio.

## Second-Hand "Automobile" Machinery.

### Boring Machines

(1) "F" Baker Special  
(1) 3" Bar Lucas—42" table  
(1) No. 1 Gear Feed.  
(1) 37" Bridgeport—(1) head  
(1) 42" Bullard Turret Head

### Drill Presses

(8) Barnes Friction.  
(1) 1-spindle sensitive  
(2) 2-spindle sensitive  
(2) Barnes  
(1) 20" Hamilton, complete  
(1) 22" Blaisdell  
(1) 24" Pratt & Whitney  
(1) 24" Baker High Speed  
(4) 25" W. F. & J. Barnes  
(2) 28" Lodge & Davis  
(1) 28" Hamilton, tapping att.  
(1) 30" Prentice Bros. (new)  
(1) 34" Barnes—gear feed

### Gear Cutters

(1) 30" x 8" Brainerd spur  
(1) 50" x 11" Gould & Eberhardt spur  
(1) 130" x 20" Gould & Eberhardt spur

### Grinders

(1) No. 1 Bath Universal  
(1) No. 2 Bath Universal  
(1) Pratt & Whitney cutter and surface

### Hammers

(1) 200 lb. Mossberg-Granville drop

### Lathes

(1) 14" x 6' Bradford tool room  
(1) 14" x 8' Prentice Bros.  
(2) 15" x 6' Blaisdell  
(1) 16" x 6' Davis  
(1) 16" x 6' Pratt & Whitney  
(1) 16" x 6' Lodge & Shipley  
(2) 16" x 8' Lodge & Shipley, Pat. Head  
(1) 16" x 8' Hamilton  
(1) 16" x 8' Davis  
(1) 18" x 8' LeBlond—chuck  
(1) 18" x 14' Hamilton  
(1) 24" x 12' Lodge & Shipley, Pat. Head  
(1) 24" x 12' Reed—chuck  
(1) 24" x 8' Flatther—chuck  
(1) 24" x 10' Lodge & Barker  
(1) 32" x 20" Jackson & Wiley  
(1) 42/56" x 16" American tripl. geared  
(1) 62" x 20" Cummer

### Lathes—Polishing

(3) No. 3 Diamond—52 x 1 1/4 spindle  
(4) No. 2 Northampton—48 x 1 1/4 spindle  
(2) No. 7G Diamond—48 x 1 1/4 spindle

### Milling Machines

(1) No. 2 Pratt & Whitney hand  
(1) No. 3 Garvin—hand  
(5) No. 1 Pratt & Whitney plain  
(1) No. 2 Kempamith plain  
(1) No. 1 Brainerd plain  
(1) No. 2 Brown & Sharpe plain—gear feed  
(6) No. 2 Pratt & Whitney Lincoln pattern  
(1) No. 40 Becker-Brainerd double spindle  
(1) 42" x 24" x 8' Ingersoll—slab

### Planers

(1) 20" x 20" x 4' Wheeler  
(1) 24" x 24" x 6' Cincinnati  
(1) 26" x 26" x 10' Powell, (2) heads  
(1) 30" x 30" x 12' American, (2) heads  
(1) 42" x 36" x 14' Cincinnati, (2) heads  
(1) 72" x 64" x 27' Fitchburg, (1) heads

### Shapers

(1) 15" Pratt & Whitney  
(1) 16/18" Gould & Eberhardt, high duty  
(2) 20" Hendey  
(2) 24" Gould & Eberhardt, high duty  
(2) 28" Hendey

### Screw Machines

(4) No. 3 Hartford Automatic  
(6) No. 3 1/2 Hartford Automatic

### Turret Lathes

(2) No. 2 Pratt & Whitney, with wire feed  
(2) No. 3 Pratt & Whitney, wire feed  
(1) No. 4 Bardons & Oliver  
(1) No. 4 Windsor  
(2) 2" x 24" Jones & Lamson  
(1) 3" x 36" Jones & Lamson  
(1) 21" Gisholt, with taper  
(2) 22" Lodge & Shipley  
(1) 22" Bullard "H"  
(1) 28" Milwaukee

### Miscellaneous

(1) 2-spindle Ames profiler  
(1) 1 1/2" Acme single head bolt cutter  
(1) No. 14 Higley cold saw  
(1) 38" Band saw

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### LATHES.

94" x 18' Putnam.  
84" x 40' Putnam.  
54" x 24' Bement.  
36" x 12' Putnam, Rod Feed.  
32"-58" x 16' Gap.  
30" x 14' Fifeild.  
29" x 16' G. A. Ohl.  
28" x 10' New Haven.  
26"-48" x 16' McCabe Double Spindle.  
25" x 12' Fifeild.  
24" x 20' Pond.  
24" x 9' Pond, Rod Feed.  
20" x 13' Betts.  
20" x 8' Betts.  
20" x 8' Pond, Rod Feed.  
20" x 7' 10" Pond.  
19" x 6' Pond.

### SHAPERS.

25" x 8' Pedrick & Ayer, Open Side.  
20" x 30" Pedrick & Ayer, Open Side.  
24" Hendey.  
18" Hendey.  
16" Steptoe.  
13" x 22" English Traveling Head.  
9" x 28" Sellers Traveling Head.

### HAMMERS.

1000 lb. Chambersburg Steam Drop.  
800 lb. Pratt & Whitney Board Drop.  
400 lb. Merrill Board Drop.  
400 lb. Bliss, Peck Lift.  
200 lb. Morgan.  
50 lb. Little Giant Trip.  
50 lb. Justice.  
Williams & White No. 4 Riveter.  
No. 2 Hawkeye Trip.  
No. 6 "Dupond" Power.

### SLOTTERS.

18" Bement.  
10" New Haven.  
10" Lowell.  
6" Howes & Phillips.

### PLANERS.

84" x 84" x 24' Putnam.  
37" x 33" x 10' Bement.  
33" x 30" x 8' New Haven.  
30" x 30" x 12' Bement.

### MISCELLANEOUS.

No. 3 LeBlond Uni. Miller, with Vertical Attachments.  
No. 5 1/2 Bardons & Oliver Turret Lathe.  
No. 5 Cincinnati Double End Punch and Shears, 8" Throat.  
10" x 30" Iroquois full Universal Grinder.  
No. 2 Kempamith Plain Miller, practically new.  
4 1/2" x 48" Burr Shaft Keyseater.  
60" Harrington Boring Mill for Pulleys.  
8" Eaton, Cole & Burnham Pipe Machine.  
9" Higley Cold Saw.  
No. 4 Hibbard Punch Press.  
S 22 Ferracute Forging Press.  
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## High-Grade Second-Hand Tools For Sale

### DRILLS

Two-spindle Redington Sensitive Drill.  
Three-spindle Barr Sensitive.  
Three-spindle Barnes, 16" gang.  
Four-spindle Harrington, spindle adjustable laterally on rail.  
12" Le Blond Sensitive.  
24" Sliding Head Back Geared.  
24" Aurora Stationary Head, chuck.  
26" Barnes Stationary Head.  
26" Bickford Upright Sliding Head.  
28" Stationary Head Mfr.'s, b. g., p. f.  
28" Lodge & Davis Back Geared.  
32" Aurora Sliding Head, chuck.  
4" Universal Radial Drill Co.'s Plain Radial.  
4" Niles Plain Radial.  
5" Niles Half Universal Radial, gear feed, lat-est pattern.  
5" American Plain Radial, tapping attachment.

### GRINDERS

No. 1 Landis Universal.  
8" Head Ring and Surface; new.  
8 x 26 Plain Diamond Roll.  
10" Diamond Machine Co., Plain Cone.  
12" x 42" Landis Universal.

### LATHES

13" x 6" Pratt & Whitney Turning Lathe.  
14" x 5" Reed Stud Lathe.  
14" x 5" Hendey, c. r., hand cross feed.  
14" x 6" Flather, pl. rest, 2 chucks.  
15" x 6" Blaisdell, h. s., rise and fall rest.  
16" x 6" Lodge & Shipley Cone Driven, c. r.  
16" x 6" Pratt & Whitney Tool Room, h. s., taper attachment.  
17" x 6" Le Blond, c. r., h. s., taper.  
18" x 6" American Tool Works, c. r.  
18" x 8" Flather, c. r., h. s., hexagon turret.  
18" x 8" Bradford, c. r., h. s., hexagon turret.  
18" x 10" Putnam, h. s., rise and fall rest.  
20" x 8" American Tool Works, c. r.  
20" x 10" American Tool Works, c. r.  
23" x 10" Greaves-Klusman, c. r.  
24" x 8" American Tool Works, c. r.  
24" x 10" American Tool Works, c. r.  
24" x 12" Lodge & Shipley, five step cone.  
24" x 23" Ffield, c. r., chuck.  
28" x 16" Ffield, compound rest.  
30" x 12" American Tool Works, c. r., taper attachment.  
32" x 10" Fitchburg, c. r.  
36-42" x 10" Perkins Lathe, c. r., chuck.

### PULLEY LATHES

26" Stevens Pulley.  
36" Niles Pulley.  
Bement Double Head Axle.  
Pond Axle.  
40" Schellenbach Pulley Boring and Turning Machine.

### MILLERS

No. 0 Garvin Plain.  
No. 2 Le Blond Universal, belt and geared feed.  
No. 2 Lodge & Davis Plain, back geared.  
No. 3 Cincinnati Universal, back geared.

### PLANERS

24" x 24" x 4' New Haven, one head.  
24" x 24" x 5' Whitcomb, one head.  
24" x 24" x 8' Lodge & Davis, one head.  
27" x 27" x 6' Smith & Silk, one head.  
30" x 30" x 8' Pease, one head.  
30" x 30" x 12" American Tool Works, two heads.  
30" x 30" x 14' Daw's & Egan, two heads.  
36" x 36" x 16' Hewes & Phillips, one head.  
36" x 42" x 14' American Tool Works, two heads.  
44" x 44" x 10' New Haven, one rail and one side head.  
70" x 48" x 27' Pond, one head.

### SCREW AND TURRET MACHINES

¾" Cleveland Full Automatic Screw Machine.  
¾" Cleveland Automatic Screw Machine.  
1" Foster & Kimball Wire Feed Screw Machine.  
No. 6 American Screw Machine, pf., fric. hd.  
2" Jones & Lamson Turret Lathe.  
22" x 6" Lodge & Davis Turret Lathe.  
No. 3 Bardons & Oliver Turret Lathe.  
42" New Haven Turret Lathe.  
48" Gisholt Gap Turret Lathe.

### MISCELLANEOUS

50-lb. Beaudry Power Hammer.  
90-lb. Stiles & Parker Drop Hammer.  
1100-lb. Friction Board Drop Hammer.  
Bement & Dougherty Horizontal Boring and Drilling Machine.  
1¾" National Bolt Cutter; complete.  
2" Jarecki Pipe Machine.  
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36" Ferracute Notching Press.

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38" x 18" New Haven Lathe, cpd. rest.  
32" x 13" New Haven Lathe, cpd. rest.  
30" x 26" American Tool Works Lathe, cpd. rest and rapid change gear.  
22" x 18" L. W. Pond Lathe, cpd. rest.  
2-18" x 6" New Haven Lathes, R. & F. rest.  
40" Aurora Upright Drill, B. G., P. F. & S. H.  
36" Aurora Upright Drill, B. G., P. F. & S. H.  
52" Blaisdell Drill, B. G., P. F. & S. H.  
14" 4-spindle Woodward & Rogers Sensitive Drill.  
42" x 42" x 18" Betts Planer, one head.  
26" x 26" x 6" Brettell Planer, one head.  
18" x 6" Industrial Works Traveling Head Shaper.  
No. 1½ American Tool Works Universal Miller.  
No. 13 Garvin Plain Miller.  
4" Saunders Pipe Machine.  
6" Jarecki Pipe Machine.  
No. 483 Toledo Gate Shear, cap. plate 60 x ½".  
No. 4 Bardons & Oliver Turret Lathe.  
No. 1 Garvin Screw Machine.  
24" Egan Pony Planer.  
20 HP. Ajax Gas Engine.  
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**BROWN & ZORTMAN MACHINERY COMPANY**  
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The owners of an ornamental iron and wire works in active operation will sell the entire business, or part of it, to a practical man at a very low price. The reason for selling is that the owners have no experience in the business, and being busy men in their own lines have no time to devote to this business.  
The plant consists of a one-story brick building, 80' x 200', detached brick boiler house, brick shipping house, frame pattern shop, one dwelling house and stable, team and wagon. The shop is equipped for doing practically all sorts of wrought and cast iron work, including light structural work. It also manufactures ornamental iron and wire fences in great variety, while the foundry is daily turning out as fine iron castings as any in the country. Low taxes and insurance; splendid shipping facilities by rail or water. Will sell free of all indebtedness, except bonded debt of \$25,000.00.  
This is a great opportunity for any one who is at all acquainted with the iron trade to secure an active, growing concern at a low price. Labor is plentiful at reasonable prices, nine-hour days and no union against which to contend. Inspection solicited. For further information, address  
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Capacity—15"—60 lb. Beams  
Channels, Angles, Etc.  
In 20 Seconds, 10 H.P.

We need more space in our shop and will accept any reasonable offer for this Tool.

**IT IS IN A1. CONDITION  
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**FOR SALE**  
18" Bar Mill with 40 Rolls  
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Address "B. S.," care *The Iron Age*, New York.

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2 No. 1 Kempsmith Plain, immediate delivery.  
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3 12x5' Davis Late Pat. Engine Lathes.  
16x6' Flather Engine Lathe Pl. rest, P.C.F.  
16x6' Reed Engine Lathe Pl. rest, P.C.F.  
21x8' Ffield Engine Lathe Cp. rest, P.C.F.  
42x12' Engine Lathe, Pl. rest, P.C.F.  
30x30x8' Putnam Planer, fine order.  
36x36x11' Sella's Planer.  
2x24 Jones & Lamson Flat Turret Lathe.  
1" Dresses Turret Lathe Auto. Chuck.  
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No. 3 Pratt & Whitney Turret Lathe, 3" hole, friction head power feed to turret slide.  
2", 2½", 3" and 4" "Fosdick" Radials, new.  
4½" Universal Rad. Drill Co.'s Full Univ. Radial.  
No. 1½ Landis Universal Grinder.  
8" Cornice Brake.

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1-24" Acme Upsetting and Forging Machine. 1-2" Ajax Upsetting and Forging Machine. 1-1000 lb. Merrill Bros. Friction Roll Drop Hammer. 1-500 lb. Merrill Bros. Friction Roll Drop Hammer. 1-300 lb. Siles & Parker Friction Roll Drop Hammer. 1-600 lb. Double Stand Steam Hammer. 1-40 lb. Bradley Helve Hammer. 1-Williams, White Co. Eye Bending Machine, capacity 2" iron. 1-Style E. Cleveland Punch & Shear. 22" throat, capacity 2" hole through 1" plate, belt driven, good as new. 1-Hilles & Jones combination punch and shear, belt driven. 1-No. 17 Williams, White & Co., double end punch and shear. 2-Double crank power presses, 40" between housing, 6" shaft, 8" stroke; area of bed, 18 x 60; area of cross head, 14 x 60; weight, 25,000 lb.; good condition.  
Also a large list of forging sheet metal and wood working tools. Write us as to your requirements.

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### DIRECT-CONNECTED SETS

1-75 k. w. 110 volt Western Electric generator, direct connected to automatic engine; speed, 250 r. p. m.  
1-100 k. w. G. E. 220 v. generator and Ball engine.  
1-150 k. w. G. E. 220 volt generator and Erie Ball engine.  
1-250 k. w. 440 volt 60 cycle G. E. three phase A. T. B. generator, direct connected to 20 x 24 automatic engine; speed, 200 r. p. m.  
1-400 K. W. GENERAL ELECTRIC 260 V. GENERATOR, AND WILLIAMS TANDEM COMPOUND ENGINE, 140 R. P. M.  
1-750 k. w. General Electric 260 v. Generator and Williams cross compound engine, 130 r. p. m.  
1-1000 k. w. General Electric 260 v. Generator, and tandem compound Porter Allen engine, 130 r. p. m.  
1-100 K. W. 125 VOLT G. E. GENERATOR AND TANDEM COMPOUND IDEAL ENGINE, COMPLETELY OVERHAULED, AND NOW AT A. L. IDE & CO.'S SHOPS, SPRINGFIELD.

\$100,000 worth of Corliss engines, automatic engines, tubular and water tube boilers, condensers, boiler feed pumps, air compressors, direct and alternating current motors and generators, direct connected electrical units, etc., being taken out of service by the COMMONWEALTH EDISON CO. owing to the installation of their current; all material is in first-class operative condition, still on original foundations, where it can be inspected under full working conditions; prices one-half original cost; delivery immediate; terms liberal; send for list.

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One 9" x 14" four-driver saddle-tank Vulcan locomotive; diameter of driving wheel, 30"; boiler pressure, 150 lb.; weight, 26,000 lb.; tank capacity, 400 gallons. Also one No. 2 Smith concrete mixer on truck with engine and boiler. Also ten No. 3 Wheel Scrapers.  
All of the above practically new, having only been used for a period of about five or six months. Apply **THE L. SCHREIBER & SONS CO.,** Cincinnati, Ohio.



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3—10-ton Industrial Locomotive Cranes.  
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68—Excelsior Bottom Dump Buckets, capacity ½ to 1½ yds.  
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1—Hayward 1-yd. Orange Peel Bucket.  
1—Hayward ¾-yd. Orange Peel Bucket.  
1—Hayward 1¼-yd. Orange Peel Bucket.  
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53—Boilers, Vertical and Locomotive types, mounted on wheels and skids, from 10 to 100 H. P.; various makes.  
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42—Steam Drills, various sizes and makes.  
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- 1—32 x 52 Filer & Stowell, L. H., HEAVY DUTY, double ported, double eccentric.  
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1—20 x 48 Allis L. H., heavy girder frame.  
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1—12 x 30 Allis L. H., heavy girder frame.  
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One or two second-hand Blast Furnace Blowing Engines; state maker's name; give dimensions and full particulars; how long been used; where can be inspected. Terms cash. Address "B. F. B." care The Iron Age, New York.

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1—16 x 16 Erie Ball, center crank, wheels 84" x 15".  
1—15 x 15½ Imperial, center crank, wheels 72" x 16".  
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1—13 x 12 Ball & Wood, center crank, wheels 54" x 13".  
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The largest stock in the country to select from; immediate delivery; fully guaranteed. Also machine tools, hoisting engines, lathes, planers, punch presses, gas and gasoline engines, steam engines, etc.

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IMPROVED WATER-TUBE TYPE  
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One 30 x 72 Right Hand "Hamilton" Corliss Girder Frame, 16" shaft; band wheel, 24" in diameter, 72" face; 150' of 70" threeply leather belt with the above.

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One 20 x 20 and 1½ x 24 stroke, all in A No. 1 order.

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22 x 14 x 24 Deane Duplex Heavy Pressure Pump.  
18 x 10 x 12 Snow Underwriters' Pump.

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1—18 x 36 Right Hand Ohio Corliss.

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Also

6—72 x 18 Boilers, 125 lbs. steam pressure, 6" flues, full front.

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1—10 x 18 Erie Engine.  
1—75 K.W. D.C. 250 Volt Generator.  
Complete with Switchboard and attachments. All in good condition. Larger unit being installed.

THE COLUMBUS IRON & STEEL CO.,  
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## Special Bargains 220 Volt two phase 60 cycle Alternating Current MOTORS

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1—50 H.P. "Westinghouse."  
1—35 H.P. "General Electric."  
1—30 H.P. "Westinghouse."  
1—15 H.P. "Westinghouse."  
4—10 H.P. "Westinghouse."  
1—7½ H.P. "Westinghouse."  
1—5 H.P. "Westinghouse."  
Large Stock A. C. and D. C. Motors and Dynamos for immediate delivery.  
FRANK TOOMEY,  
Nos. 127-131 No. Third St., Philadelphia, Pa.

## LOCOMOTIVES

80 N. Y. Elevated Forney type locomotives, 25 ton. Also have at shops 75 additional locomotives, narrow and standard gauge; also box and flat cars

SOUTHERN IRON & EQUIPMENT CO.  
Atlanta, Ga.

## BARGAINS

STEAM AND GAS ENGINES  
LOCOMOTIVES, POWER SHEARS  
AIR COMPRESSORS  
BOILERS, STEAM HAMMERS  
LARGE FLY WHEELS AND PULLEYS  
ROLLING MILLS  
A Complete Tin Plate Plant  
1-9 in. and 1-10 in. Guide Mills  
1-18 in. Muck Mill

### LOCOMOTIVES FOR SALE.

1 80 in. gauge four wheel saddle tank locomotive, in first class condition. Ready for shipment.  
1 Standard Gauge 4 Wheel Saddle-tank 15 in. x 24 in. Locomotive, 35 tons. Penna. R.R. make.

**B. M. EVERSON,**

German Nat. Bank Bldg. (6th and Wood) Pittsburgh, Pa.

## John Henning & Son

1016-22 E. Susquehanna Ave.,

711-23-25-27 Richmond St.,

**Philadelphia, Pa.**

We carry a large stock of second-hand machinery, engines, boilers, tanks, pumps, iron pipe and shells; all sizes.

WRITE FOR LIST.

We buy and dismantle large plants.

## REORGANIZATION

## Southern Steel Company

The Plan and Agreement of Reorganization, dated May 15th, 1908, having been approved by all the depositing First Mortgage Bondholders and Collateral Trust Note Holders, and by creditors to a majority in amount of all claims filed, proved and allowed in the bankruptcy proceedings, and by stockholders to a large amount, the Reorganization Committee, in order that all security holders and creditors may become parties to the said Plan of Reorganization and receive the benefits thereof, **HAVE EXTENDED THE TIME FOR THE MAKING OF DEPOSITS THEREUNDER TO AND INCLUDING JULY 1ST, 1908, AFTER WHICH DATE FURTHER DEPOSITS WILL ONLY BE RECEIVED SUBJECT TO SUCH TERMS AND CONDITIONS AS THE COMMITTEE MAY SEE FIT TO IMPOSE.**

Creditors are reminded that their claims must be filed, proved and allowed in the bankruptcy proceedings prior to deposit under the Plan of Reorganization.

New York, June 15, 1908.

**JAMES T. WOODWARD, Chairman;**

**OTTO T. BANNARD,**

**ROBERT B. VAN CORTLANDT,**

**WALTER T. ROSEN,**

**FRANKLIN Q. BROWN,**

**W. P. G. HARDING,**

**CORNELIUS VANDERBILT,**

**Reorganization Committee.**

**D. G. BOISSEVAIN, Secretary,** 30 Pine Street, New York City.

**HORNBLOWER, MILLER & POTTER,**  
Counsel.

## Automatic Screw Machines FOR SALE

National Acme Mfg. Co.'s latest pattern Multi-Spindle.

1—No. 53 1 in. x 5½ in.

1— " 54 1½ in. x 6 in.

1— " 56 2¼ in. x 10 in.

Have been used only a few months, good as new. Will sell at a bargain.

**THE SENECA FALLS MFG. CO.**  
Seneca Falls, N. Y.

## For Sale One 15 Million Gallon Compound Condensing Pumping Engine

Built by the Holly Manufacturing Co., Lockport, N. Y.

This Engine is at present running, is practically as good as new, and can be inspected in Buffalo, N. Y.

The principal dimensions of the engine are as follows:

Number of steam cylinders, 4.

Diameter of the two high-pressure cylinders, 33 inches each.

Diameter of the two low-pressure cylinders, 66 inches each.

Diameter of the high-pressure piston rod, 4½ inches.

Diameter of the two low-pressure piston rods, 5 inches each.

Stroke of the engine, 48 inches.

Diameter of each plunger, 34 inches.

Diameter of plunger rod, 6 inches.

Number of gallons water pumped by each revolution, 742.

Capacity of engine in twenty-four hours, 15 million gallons.

Number of valves in pump chamber, 2,016.

Diameter of valves, 1½ inches.

Diameter of fly-wheel, 20 feet.

Weight of fly-wheel, 25 tons.

Diameter of discharge pipe, 36 inches.

Horse power of engine, 550.

This engine is just the thing for a town of 40,000 inhabitants.

**JACOB ULLMAN,**

44-46 Lloyd St., Buffalo, N. Y.

## AGENCY WANTED

I am open to take over the agency or represent in New York and the East or for the entire United States one or two first-class accounts on commission basis. Have an office and all facilities to secure business. Can give highest back and business references. Address "RICHARD SON," care *The Iron Age*, New York.

## For Sale

A complete line of iron specialties selling to the furniture trade. Just the thing for a foundry doing light grey iron work. Trade established for twenty years. Exclusive patents.

Address "W. X."

Care *The Iron Age*, New York.

## For Sale

One air compressor outfit, consisting of one electric driven 10 x 12 air compressor manufactured by Chicago Pneumatic Co.; one electric motor, 35 horse power, 230 volts, compound wound, complete with starter, manufactured by the Crocker-Wheeler Co., and one air reservoir, 3' 0" in diameter, 0' 0" long. All in good working order. This outfit was used about six months and is now in A-1 condition, and can be seen at the New York Public Library Building, 5th Ave., between 40th and 42nd Sts. Ask for Mr. Luhr, Foreman.

**THE SNEAD & CO. IRON WORKS,**

Foot of Pine St., Jersey City, N. J.

## Opportunity

We are looking about for some article or articles to take over. If you have something of merit, we will take up the financing, manufacturing and sale of it on any fair basis. Address "H. W. D.," care *The Iron Age*, New York.

## For Sale Cheap

80 feet 49½ in. 3 ply leather belting, in good condition, also 18 feet 30 in. 3 ply belting.

**United American Iron and Steel Co.,**

Albany, N. Y.

## Specialties Wanted

Well equipped machine shop employing from 60 to 100 hands, is open to manufacture patented articles or equipment, either on a contract or royalty basis. Located at a desirable shipping point on the Delaware River, in a steel casting center. Can handle any sort of a mechanical proposition.

**CHESTER ENGINEERING & MACHINE CO.,**

P. O. Box 419, Chester, Pa.

## Unused Traveling Derrick FOR SALE

COMPLETE STEEL TRAVELING DERRICK

ARRANGED FOR

### Clam Shell Operation

Together with large 8½ x 10 Holsting Engine, Swinging Device, Water Tank, Coal Bunker, etc., all mounted on Standard gauge steel Flat Car, P. R. R. type, fitted with spuds.

The rig has its own separate propelling Engine, is complete and ready for immediate service, never having as yet been in commission.

For detailed description, price, etc., address

**THOS. F. BAILEY,**

Attorney for First National Bank of Huntingdon, HUNTINGDON, PA.

## Business Opportunity

WANTED; to communicate with party desiring to purchase controlling interest in old established Hardware Corporation, or party who can furnish \$10,000.00 to \$20,000.00 and take position of Secretary and Treasurer retiring. Address "H. W. E.," care *The Iron Age*, New York.

## STEAM HAMMER

FOR SALE

4 ton double frame guided rod type, steam hammer, new and in perfect condition. Write for particulars. Address BOX 139, care *The Iron Age*, 1515 Real Estate Trust Bldg., Philadelphia, Pa.

## WANTED

To purchase or work on royalty articles relating to modern foundry equipment, which will guarantee economy and a saving of labor over present methods. Forward blue prints or patterns. Address "MODERN," care *The Iron Age*, New York.

## PIPE AND CASING

100,000 ft. 2-in. line pipe.  
10,000 ft. 5½-in. casing.  
14,000 ft. 8-in. pipe with plain ends.  
3,000 ft. 8-in. drive pipe.

We also carry a full line of small sizes.

**McDOWELL & COMPANY**  
Allegheny, Pa.



**Scrap Iron, Steel and Iron Rails**

bought and sold by

**M. J. & M. BLAKE,**

10th Ave. and 15th Street,

New York City.

Telephone Call, 6332 and 6333 18th St.

**RAILS.**

40, 56, 60, 70, 75, 80, 85 and 90 lb.

**RELAYING RAILS**

8, 12, 16, 20, 25, 30, 35, 40 and 45 lb.

**NEW STEEL RAILS.**

These rails are in stock at our Pittsburg yards, and can be shipped immediately; also second-hand rails in stock cut any length needed for building and contract work.

**RICHARDSON & COMPANY, Inc.**1215 WESTINGHOUSE BUILDING,  
PITTSBURG, PA.**RAIL DEALERS.**

**FOR SALE—RAILS—RELAYING**  
30-lb., 35-lb., 40-lb., 56-lb., 60-lb. Steel Rails and Splice Bars for same. Also new 12-lb., 16-lb., 20-lb., 25-lb., 30-lb., 35-lb., 40-lb. and 45-lb. No matter what weight of rail you want, write us advising tonnage and we can doubtless furnish at once.

**ROBINSON & ORR,**

421 Wood St., PITTSBURGH, PA.

We sell new Frogs and Switches.

JOHN LEONARD.

MICHAEL BLAKE.

**JOHN LEONARD & CO.****IRON AND STEEL SCRAP.****IRON AND STEEL RAILS, PIG IRON, ETC.,**

149 Broadway.

SINGER BUILDING,

NEW YORK.

TELEPHONE, 5776 and 5777 CORTLANDT

Correspondence Solicited.

**SCRAP IRON.**

We buy heavy unwieldy iron and steel scrap.

Correspondence solicited.

**BIRDSBORO IRON & STEEL  
BREAKING CO., LTD.**

BIRDSBORO, PA.

**The Morton B. Smith Co.****COPPER, BRASS  
DROSS, ETC.**Office and Warehouse  
243 Front Street**IRON AND STEEL  
SCRAP**Office  
81-83 Fulton Street.

NEW YORK

**SCRAP  
IRON or STEEL  
WANTED.****E. B. LEAF & CO.,**1242 Real Estate Trust Bldg., Philadelphia, Pa.  
Branch Office, 1206 Keystone Bldg., Pittsburg, Pa.**PIPES & BOILER  
TUBES FOR SALE**

We supply you with pipe in good second-hand condition from 1" up to 12" in any quantity, threaded and coupled.

**SECOND-HAND  
TUBES OF ALL  
SIZES,****BEAMS AND CHAN-  
NELS CUT TO  
SKETCH.****Mining and Contractors' Supplies  
a Specialty.****EAGLE METAL & SUPPLY CO.**

Johnson Ave. and Broadway, Brooklyn, N. Y.

**FOR SALE**

NEW rails from 12 to 30 pounds to yard.

RELAYERS from 30 to 80 pounds to yard.

IMMEDIATE delivery.

Main Office, Cincinnati

BRANCHES: Pittsburgh, Pa., Chicago, Ill., St. Louis, Mo., New York City, Cambridge, Mass., Worcester, Mass., Chicago Heights, Ill.

**THE JOS. JOSEPH & BROS. CO.****RAILS FOR SALE**

NEW RAILS—12 to 40 lbs. to yard.  
RELAYING RAILS—30 to 70 lbs. to yard.  
FOR IMMEDIATE SHIPMENT FROM STOCK:  
SPIKES, BOLTS AND FASTENINGS.  
Buy direct from the Manufacturer.

**HIRSCH ROLLING MILL CO.**

Office and Works, - ST. LOUIS, MO.

**BERKSHIRE IRON YARD.**

M: H. ROGERS, Owner.

**Scrap Iron, Metals, Etc.**

221-223-225 Housatonic Ave.,

BRIDGEPORT, CONN.

TELEPHONE.

WE ARE STILL BUYING

**Iron and Steel Scrap.**

Highest Prices Paid for Mixed Material.

**PLITT & CO.,**1534-1535 Real Estate Trust Bldg., PHILADELPHIA.  
Long Distance Phone Filbert 5470.**MIFFLIN WHEELER & CO.**

Formerly NICHOLLS, WHEELER &amp; CO.

The Arcade Building, Philadelphia, Pa.

Dealers in

**IRON AND STEEL SCRAP**Pig Iron, Muck Bars, Charcoal Blooms, &c., &c.  
Steel and Iron Plates, New and Old Rails.**RAILS****NEW AND RELAYING  
All Weights, with Fastenings**

New 12 to 25 lb. Rails in stock at works,  
Passaic, N. J., for immediate delivery.  
Also Industrial Steel and Wooden Cars,  
Switches, Portable Track, Turntables.

**WONHAM & MAGOR,**

29 Broadway, New York.

RARE BARGAINS IN

**RAILS and EQUIPMENT**

Walter A. "ZELNICKER" Supply Co.

in ST. LOUIS

Do You Receive Our Stock Lists?

**Relaying Rails**

500 tons 12 to 40 lb. new rails.  
1000 tons 56 lb. relayers } Centrally  
1000 tons 80 lb. relayers } located.

**CONTINENTAL IRON & STEEL CO.,**

2 Rector Street, New York.

Farmers Bank Bldg., Pittsburg, Pa.

**LOCOMOTIVES**

If interested see our ad

PAGE 68

This issue of this paper.

**Davenport Locomotive Works**

Davenport, Iowa

**Frogs & Switches**

ALSO

LIGHT RAILS. } Quick Shipments of Orders  
SPICE BARS. }  
SPIKES & BOLTS }  
SWITCHSTANDS. }  
RAIL BRACES. }  
CAR PUSHERS. }  
DERAILERS. }  
HEAVY CHAIN. }  
PLATES 12" x 36" }  
CUT TO SKETCH

Central Track Supply Company, Springfield, Ohio

**Iron and Steel Scrap**

ANY QUANTITY AND SHAPE

Also all kinds of old metals bought. Plants dismantled. Stacks, beams, relaying rails, second-hand pipe and boiler tubes on hand.

**Robert M. Cunliffe,**

11th &amp; Washington Ave., Philadelphia

**RELAYING STEEL RAILS  
FOR SALE**

500 tons 48 lb., with angle-bars.  
500 tons 58 lb., with angle-bars.  
250 tons 60 lb., with angle-bars.  
115 tons 65 lb., with angle-bars.

New Light Rails, all weights, with fastenings.

**THE STEEL RAIL SUPPLY CO.,**

No. 2 Rector Street, New York, N. Y.

**TUBES**

20 Tons Second Hand Boiler Tubes,  
3 inch x 16 feet. For Sale Cheap.

**WALSH'S SONS & CO., Newark, N. J.****WE PURCHASE AND DIS-  
MANTLE OLD PLANTS****J. H. McClure & Son**

202 Walnut Place

Philadelphia

Pa.

**NORWALK  
AIR COMPRESSOR**

1,000 Cubic feet of free air per minute.  
Two-Stage, Waterjacketed, Steam Driven,  
only in operation a short time.

**POWER EQUIPMENT CO.,**  
1405 Fisher Bldg. Chicago.**MR. MAKER:**

We are in the market for anything we can buy at a right price and sell at a profit.

Our catalogue—wholesale only—does what no other book in print does: It goes each month to practically every retailer of hardware in the United States, many of whom can be reached through this medium alone.

Our catalogue quotes net wholesale prices. The retail merchant knows what he can sell the goods for without writing for discounts. Therefore he buys.

We list nothing we do not own. Of 5 and 10 cent goods in particular, and of popular priced specialties in general, we can sell very many more than any other single concern in America.

We widen your field by placing goods before thousands of merchants who do not know about them. Get your goods in our catalogue and it is like having 500 traveling men calling on the trade every month.

We do not believe in 50 per cent profits. We do not run "bait" at cost or less. We sell all goods on a just, moderate profit, fair alike to maker and retailer.

We are pioneers in introducing goods. After an article appears in our catalogue you will find other houses eager to handle it.

We sell at wholesale only. No one not a legitimate merchant can buy goods of us, or have a copy of our catalogue.

When you've got a seller, you need not wait until your agent is in one of our cities. Simply write us and send a sample.

**Butler Brothers**New York Chicago St. Louis  
Minneapolis

## Help Wanted.

**Undisplayed Advertisements for Help Wanted not exceeding fifty words, including address, One Dollar each insertion. Additional words two cents each.**

**Original letters of reference should not be enclosed with replies to advertisements appearing in these columns, as they are frequently mislaid and lost. A copy of the reference will serve the purpose.**

**SALESMAN** to represent well established manufacturers of bicycle sundries throughout the South and territory east of Chicago, with the exception of the cities of New York, Boston and Philadelphia. Address "Cornwall," 72 Dwight street, Springfield, Mass.

On July 1 we shall have a very attractive proposition for **SALESMEN** desiring to handle a side line; write us for particulars now. Colonial Works, 233-237 Norman avenue, Brooklyn, N. Y.

Young or middle aged man, who has had some experience in hydraulics, to design and develop a water wheel. Address "R.," care *The Iron Age*, New York.

Wanted as an **ASSISTANT FOREMAN** a first-class toolmaker that has had experience on building machinery and small tool work. Address "J. W.," care *The Iron Age*, New York.

We want a thoroughly practical man who is fully conversant in the manufacturing of specialties such as ice cream freezers, ice shavers, lemon squeezers, fish scalers and kindred articles; he must be able to produce these articles at the lowest possible cost and take full charge of a plant. Address "M. M. C.," care *The Iron Age*, New York.

**SALESMAN** New York City and immediate vicinity; tin plates, sheets, roofings, kindred lines; state age, experience, references and salary expected. Address Wheeling Corrugating Company, 47 Cliff street, New York.

**CHEMIST** for blast furnace in central Pennsylvania; one who has had some experience; state age, experience, references and salary required. Address "N. F.," care *The Iron Age*, New York.

Wanted, **ROLLER** for 8 in. and 12 in. tandem mill, with two heating furnaces; good tonnage. Address "Combination," care *The Iron Age*, New York.

**SALESMAN** wanted; a live, energetic man to sell bar iron, sheets, plates, structural material, New York City and vicinity; state experience, references and salary required. Address "Excellent Opportunity," care *The Iron Age*, New York.

Wanted, **SALESMEN**, traveling or local, selling the machinery supply trade or consumers. Address Challenge Machine Company, Inc., Philadelphia, Pa.

A well-known Southern hardware jobbing house of long standing and established trade can utilize the services of two first-class **TRAVELING SALESMEN**; territory in Virginia and West Virginia; must be thoroughly experienced. Address "Virginia," care *The Iron Age*, New York.

Wanted, **AGENTS** to take as a side line our glass cutters and other articles in hardware; territory given to the right parties. Address The Hart Mfg. Company, Unionville, Conn.

**SHEET and TIN MILL SUPERINTENDENT**; must have good operating and executive ability; an economist and cost estimator; state age, experience, reference and salary expected; correspondence confidential. Address "B. B.," care *The Iron Age*, New York.

Wanted, **SALESMAN** to introduce a new line of special steels; must be qualified to conduct demonstrations; one having had previous experience preferred. Address "J. R.," care *The Iron Age*, New York.

Wanted, First-class **HARDWARE SALESMAN** of experience, calling on retail hardware trade; good territory open to right party; call or write. Rosenberg & Tepper, 49 Warren street, New York.

## Situations Wanted

**Undisplayed Advertisements for Situations Wanted not exceeding twenty-five words, including address, Fifty cents each insertion. Additional words two cents each.**

Wanted, to represent reliable manufacturer on road; headquarters Kansas City; 15 years' hardware selling experience. Address "O. N.," care *The Iron Age*, New York.

Mechanical engineer, college graduate, with long experience in smelting and refining plants, stamps, heavy machinery, power plants, &c., desires position as **ENGINEER** in charge or designer. Address "E. N.," care *The Iron Age*, New York.

As **GUIDE or BAR ROLLER**; large experience; references if required. Address "N. E.," care *The Iron Age*, New York.

**COST MAN**, eight years' experience installing, supervising systems, iron, steel, machinery, electrical lines, wants permanent connection; excellent references. Address "D.," care *The Iron Age*, Compton Building, Boston, Mass.

To **MANUFACTURERS**: experienced manufacturers' salesman having 10 years' acquaintance and established trade with the jobbers and large dealers of Ohio and six adjoining States, desires to add one or two more **Al** manufacturers' accounts on fair commission basis; reference supplied. Address "L. M. S.," care *The Iron Age*, New York.

**ROLLING MILL SUPERINTENDENT**; good experience, good executive ability, and an economist in all kinds of rolling mill work. Address "K.," care *The Iron Age*, Park Building, Pittsburgh, Pa.

Experienced **ENGINEER, ESTIMATOR** and **REPRESENTATIVE** desires change; capable, up to date, handle any proposition, industrial, contracting or manufacturing lines; experience in malleable, gray iron and steel; Philadelphia territory preferred. Address "Representative," care *The Iron Age*, New York.

As **GENERAL SUPERINTENDENT**: has had wide practical experience in malleable and gray iron foundries; a good executive with ability to construct and organize plant. Address "G. N.," care *The Iron Age*, New York.

Position of trust or responsibility by capable machinery executive office man; correspondent, systematizer; exact, thorough; experience in various sections as secretary, representative, office manager, paymaster, cashier; moderate salary; clean record; investigation courted. Address "Trustworthy," care *The Iron Age*, New York.

Wanted by experienced hardwareman and traveling salesman to represent manufacturer in Chicago, St. Louis and Milwaukee. Address "W. C.," care *The Iron Age*, New York.

**MECHANICAL ENGINEER**, with 18 years' experience in construction, maintenance and operation of steel works and rolling mills, desires position; thoroughly familiar with all branches; practical and up to date; can build your plant or put it on paying basis. Address "M. C.," care *The Iron Age*, New York.

Hustling experienced traveling **ENGINEER SALESMAN** with fine connections wants good agencies in the way of steel, machinery and kindred lines, or would like to represent one reliable concern as their sales manager for Pacific Coast territory; guarantee results. Address "Connection," care *The Iron Age*, New York.

A reputable lawyer who has had large legal and commercial experience desires to give part of his time to reputable concern; excellent references. Address "A. H.," care *The Iron Age*, New York.

**SUPERINTENDENT** seeks connection with progressive, growing concern; able executive and organizer; thoroughly up to date in shop practice and costs. Address "Elba," care *The Iron Age*, New York.

**SUPERINTENDENT** having 20 years' practical experience in the bolt, nut and rivet business, hot and cold work, rolling mill work, superintendent of same at present, desires a change; age 40. Address "P. M.," care *The Iron Age*, New York.

**MASTER MECHANIC** by a thoroughly practical and technical man; wide and varied experience on mills and blast furnaces, both operation and construction; unquestionable reference. Address "M.," care *The Iron Age*, Park Building, Pittsburgh, Pa.

**FORGE SUPERINTENDENT** with 16 years' executive experience; practical under all modern methods of machine, drop steam and hydraulic forging; reorganizer of unprofitable propositions; cost estimator where low costs and ability are requisite, on piece work or premium system; a producer without excuse; location no object. Address "Ability," care *The Iron Age*, Park Building, Pittsburgh, Pa.

As **SUPERINTENDENT** with a concern whose business will pay a salary of \$300 per month to a man who can show results and reduce costs. Address "R. N.," care *The Iron Age*, New York.

**SUPERINTENDENT**; hustling, aggressive and systematic; expert at tools, dies and fixtures; modern methods; straight manufacturing or interchangeable work; economical management; will show results at once; can get work out of help, raise output and reduce costs. Address "Mechanical Engineer," care *The Iron Age*, New York.

Correspondence desired with parties who are looking for man of executive ability, tact and engineering skill. Address "T. A.," care *The Iron Age*, New York.

Engineer experienced as fuel, machinery, cost and boiler and engine expert, desires position as **MACHINERY SALESMAN**. Address "J. D.," care *The Iron Age*, New York.

Mechanical engineer desires position as **CHIEF ENGINEER** or **ASSISTANT** to president, general manager or chief engineer; experienced in handling men and cutting down costs; correspondence desired. Address "K. F.," care *The Iron Age*, New York.

As **BUYER or SALESMAN** wanted by married man of 34; nine years' experience with large wholesale house of the Middle West; best references. Address "T. F.," care *The Iron Age*, New York.

For Pacific Coast, traveling position with first-class firm; acquainted with trade; best of references and Bradstreets as to ability and standing on coast. Address "P. L.," care *The Iron Age*, New York.

**FOUNDRY FOREMAN**; up to date in foundry practice; understands molding machines thoroughly; can give **Al** reference. Address "Box 348," care *The Iron Age*, Fisher Building, Chicago, Ill.

Private **SECRETARY or STATISTICIAN** by expert stenographer and accountant; 33; well educated; 12 years' exceptional experience in iron and steel and coal and coke; energetic; able; highest references; married; at present well situated in South but returning North account of family health; moderate salary accepted temporarily; New York City preferred. Address "H. M. B.," care *The Iron Age*, New York.

**BUYER or ASSISTANT**; young man; nine years' experience with large manufacturing houses; energetic and capable; **Al** references; any location; New York preferred. Address "G. E. R.," care *The Iron Age*, New York.

Man of extensive experience introducing and establishing sale of specialties of hardware and tools open for engagement after July 1; have acquaintance with leading trade of United States and Canada; can furnish unquestionable references as to character and ability. Address "Introducer," Masonic Temple Club, Syracuse, N. Y.

**CHEMIST**; university graduate; five years' experience in all grades iron and steel, alloys, ores, coal, coke, water and gas analyses; experienced in mixing crucible steels and designing laboratories; two years in charge of steel laboratory; best of references; wish charge of laboratory. Address "Metallurgist," care *The Iron Age*, New York.

**DROP FORGING SALES MANAGER**; young man (32) well acquainted with the trade throughout the country; 12 years' experience in this line covers office work, cost keeping, estimating, foreman, superintendent, correspondent, advertising and selling; with this thorough knowledge I am able to get the business where others fail. If you want a live man address "Sales," care *The Iron Age*, New York.

Wanted **SELLING AGENCY** for New York and New England of an Eastern furnace making foundry iron; highest references; prepared to finance sales. Address "E. C.," care *The Iron Age*, New York.

**BLAST FURNACE SUPERINTENDENT** or **ASSISTANT** open for engagement; wide and varied experience with raw materials; a thorough, practical chemist; fair knowledge of machinery. Address "Grade," care *The Iron Age*, New York.

**SALESMAN** experienced in machinery trades wants a good article or line to handle in New England. Address "Results," care *The Iron Age*, New York.

By man 34 years of age, who understands builders' hardware; no objection to traveling in Central States; best of reference. Address "D. N.," care *The Iron Age*, New York.

Experienced **HARDWAREMAN**, 10 years in present position in jobbing trade, wants position; fitted for manager, buyer or salesman. Address "Hardware," care *The Iron Age*, Compton Building, Boston.

As **ASSISTANT GENERAL SUPERINTENDENT** steel works by a young man with experience in blast furnace, open hearth and rail mill work; fine references. Address "Practical," care *The Iron Age*, New York.

**INSIDE SALESMAN**, competent to take charge hardware store, wants position; 25 years' experience; best reference. Address W. C. Elder, 234 Harris street, Harrisburg, Pa.

Twenty-five years' experience in the manufacture of table knives, forks and spoons in steel and German silver, solid steel and hollow handle cutlery, hardware, drawn steel and drop forged work as manager and general superintendent and buyer gives me an advantage which will help you to reduce costs. Address "Expert," care *The Iron Age*, New York.



**Situations Wanted.**

TO MANUFACTURERS AND EXPORTERS.—I know Mexico and the Mexicans; speak Spanish; have practical knowledge of iron and steel trade; would give intelligent and loyal service to liberal manufacturers of standard products desirous of extending Mexican business; would travel; references the best. Address Letra "D.," Callejon del Rebote, Durango, Mexico.

CORRESPONDENT or OFFICE MANAGER; experienced; thorough systematizer; familiar with modern methods of selling; can develop, follow up and take charge of advertising, purchasing or credits; age 28; excellent references as to character and ability; now employed. Address "Technical Education," care *The Iron Age*, New York.

**Machinists Supplies**

For Shop Supplies of all kinds we can make prompt shipments. Send for our new catalogue. Just off the press.

**MACHINISTS SUPPLY CO.**

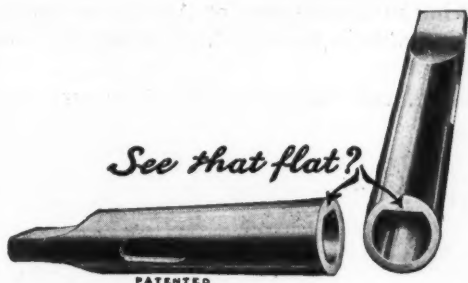
16-18 So. Canal St.  
CHICAGO, ILL.

209 Water St.  
PITTSBURG, PA.

**Factory Time Checks**

No other system has proved so simple, so inexpensive to install and so satisfactory in operation as **The Time Check System**. Our pamphlet, "Time Checks and Their Use," is well worth the three minutes necessary for a reading.

AMERICAN RAILWAY SUPPLY COMPANY  
22 Park Place, New York

**"USE-EM-UP"**

We are talking about Drills and Reamers with twisted tangs or broken shanks which are lying around your shop—idle. They cost you real money—make them earn it. Just grind a flat place on the remaining shank (time 3 minutes) and "Use-Em-Up."

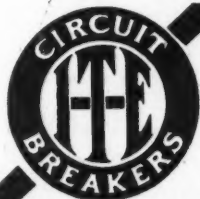
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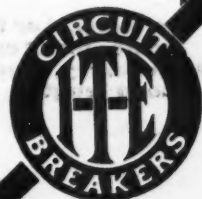
We are glad to comply with the request of the postal authorities who suggest that we make it perfectly clear that this offer is open to every one and is not limited to the readers of the *Electrical World*. Every user of electricity, who is acquainted with the I-T-E Circuit Breaker and its wide field of usefulness, may enter this competition.

In the unexpected event of a tie for any prize offered, the value of the prize will be divided equally between or among those tying.

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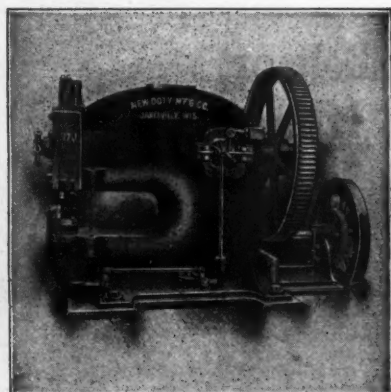
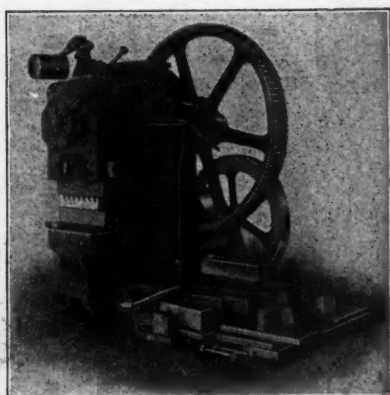
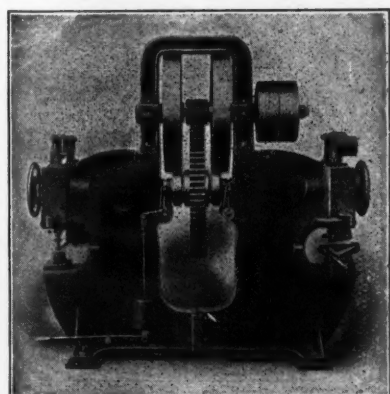
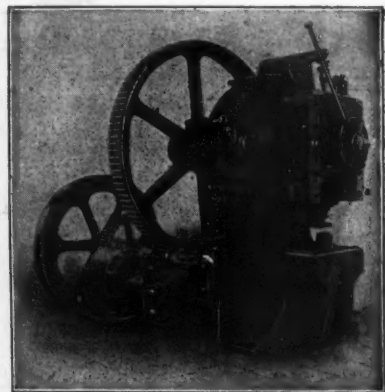
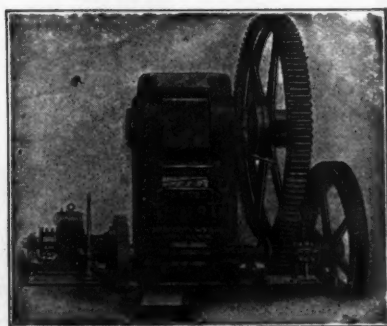
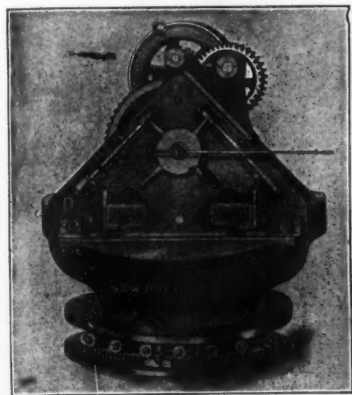


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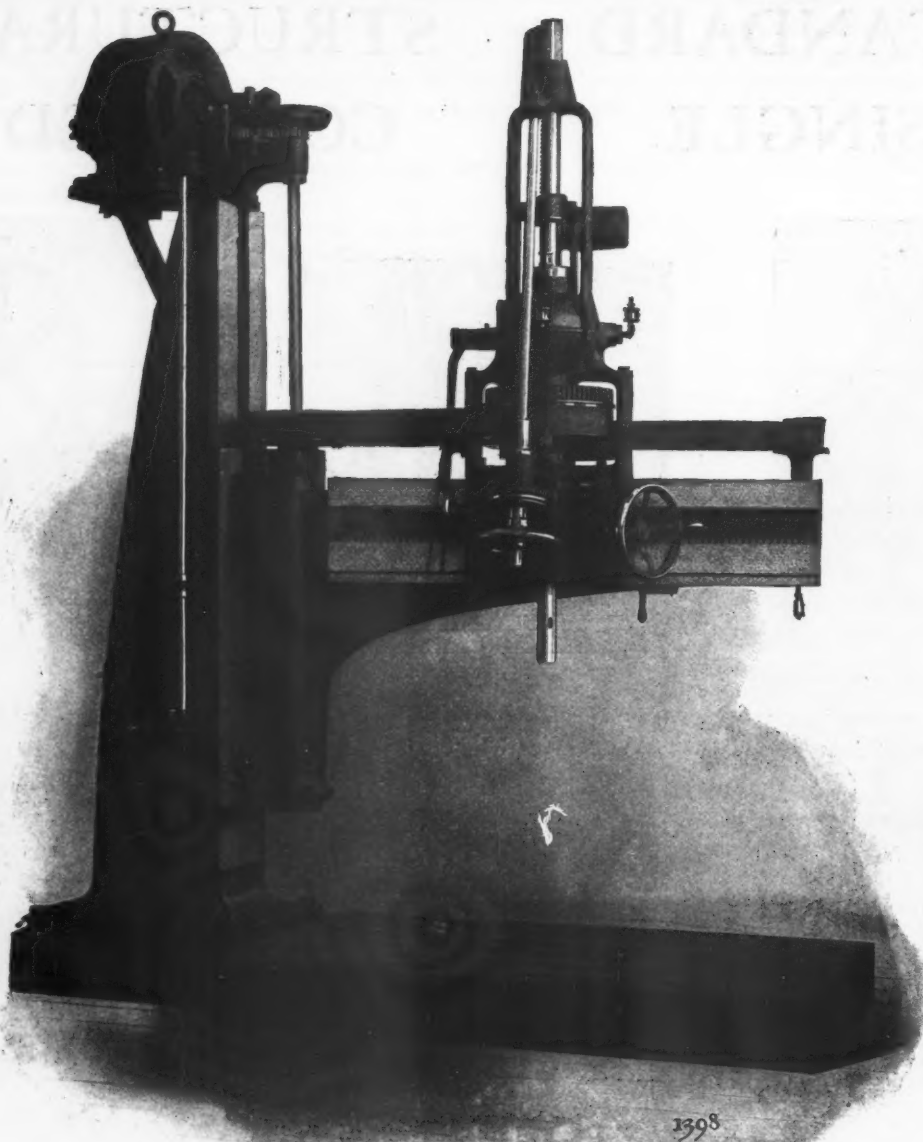
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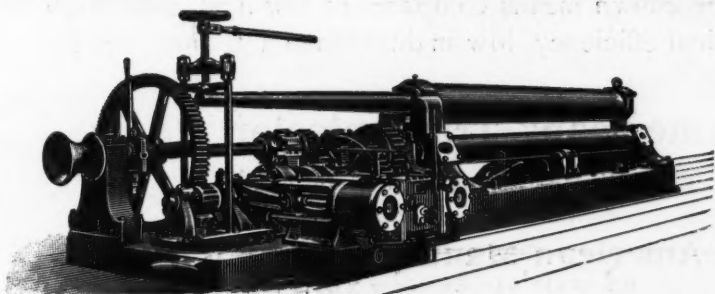
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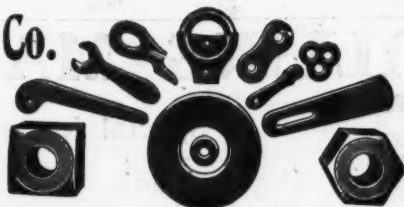
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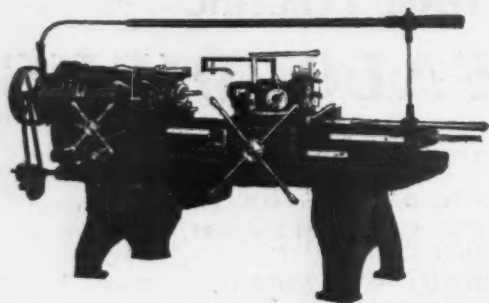
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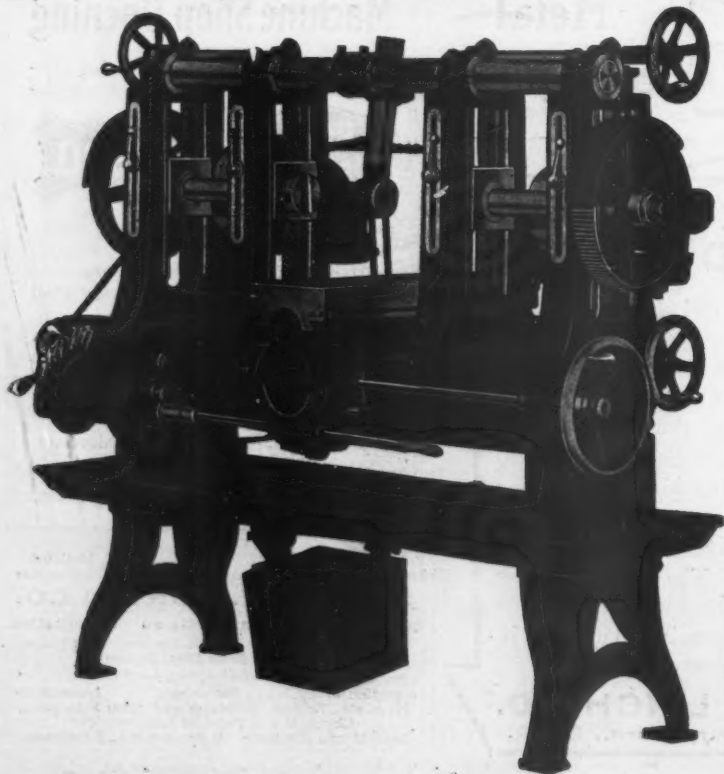
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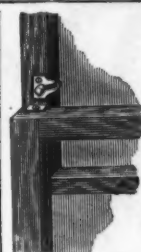
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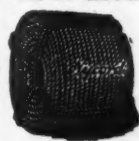
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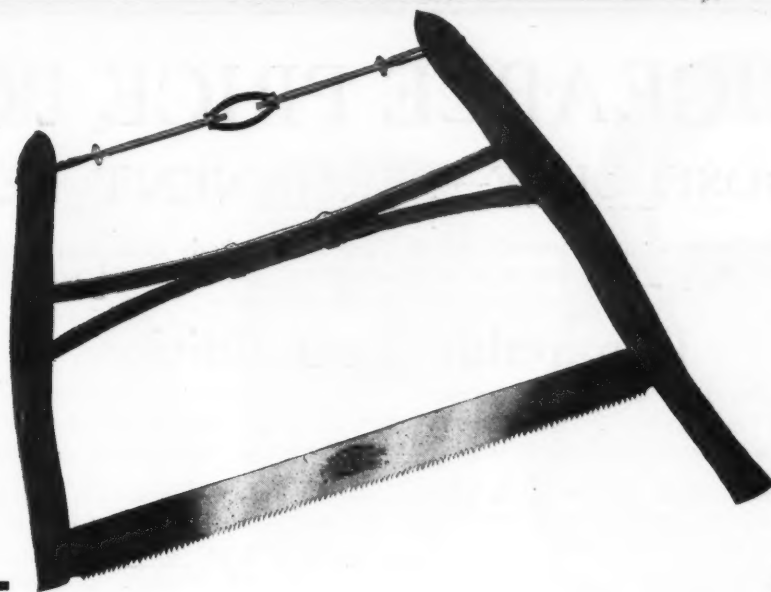
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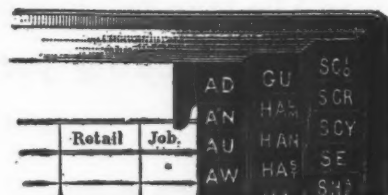
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**No. 326; Third Grade—"LOXOL"**—is of the warded type, with six key changes.

Among the merits of this construction are that the Padlock has no exposed rivets, screws or seams, and cannot be forced open except by a degree of violence sufficient entirely to destroy it. The "hermetic" construction not only gives greater security, but also a novel and attractive appearance.



Sectional View, showing type of construction.

Write for booklet giving full description with prices. These Padlocks may be secured through your regular trade channels.

**The Yale & Towne Manufacturing Co.**  
9 Murray Street, New York

Chicago

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Boston

12 Pearl Street

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818 Arch Street

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806 Kohl Building

*This type of construction is fully covered by U. S. Patents.*



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are made to cut quicker and last longer than other saws. They are time and money savers. They are made in a great variety of lengths, thicknesses, widths and teeth per inch, to fit all machine shop requirements.

Their popularity among users is such that this department of our factory has grown faster than any other within the past few years.

Starrett saws stand the test of a fair comparison with any other saws made.

Hardware dealers will find this a safe and profitable line to carry in stock. Ask us for prices.

**THE L. S. STARRETT CO., Athol, Mass., U. S. A.**

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¶ "Cheap" rope is the poorest investment a man can make. It doesn't pay to try to save a few cents *a pound* on your rope bills, you pay *more* for your rope in the end.

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**PLYMOUTH CORDAGE COMPANY**

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## A Question of ENTERPRISE

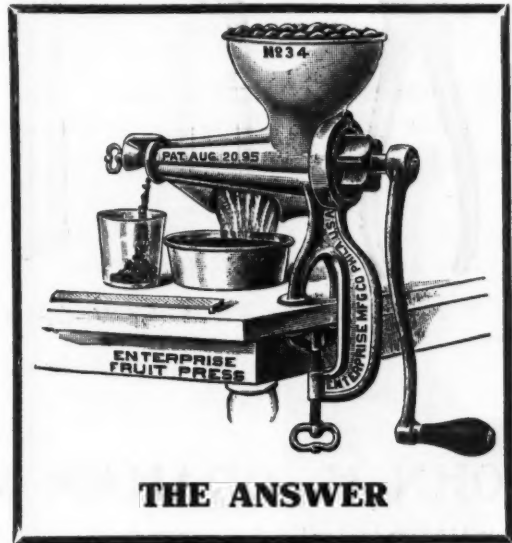
"Have you an 'Enterprise' Fruit Press?"

"No, madam, but I'll get it for you."

"Sorry, but I cannot wait. My fruit would spoil. I must go to Jones' for it."

SALE LOST.—For lack of "ENTERPRISE."

Write your jobber to-day for timely specialties, such as "Enterprise" Fruit, Wine and Jelly Presses, Cherry Stoners, Smoked Beef Shavers, Rapid Grinding and Pulverizing Coffee Mills, genuine "Enterprise" Cold Handle Sad Irons, etc., etc.



THE ANSWER

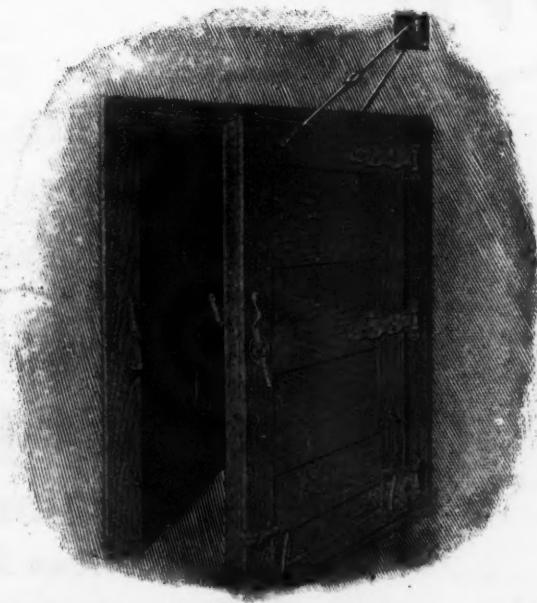
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**The Enterprise Mfg. Co. of Pa.**  
Philadelphia, U. S. A.

# THE NEW GLOEKLER COLD STORAGE DOOR

**For  
Warehouses  
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And all places which require airtight, cold-proof doors, with the additional advantage of a perfectly level floor. No sill needed, thus doing away with an old "stumbling block."



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Catalogue and Prices

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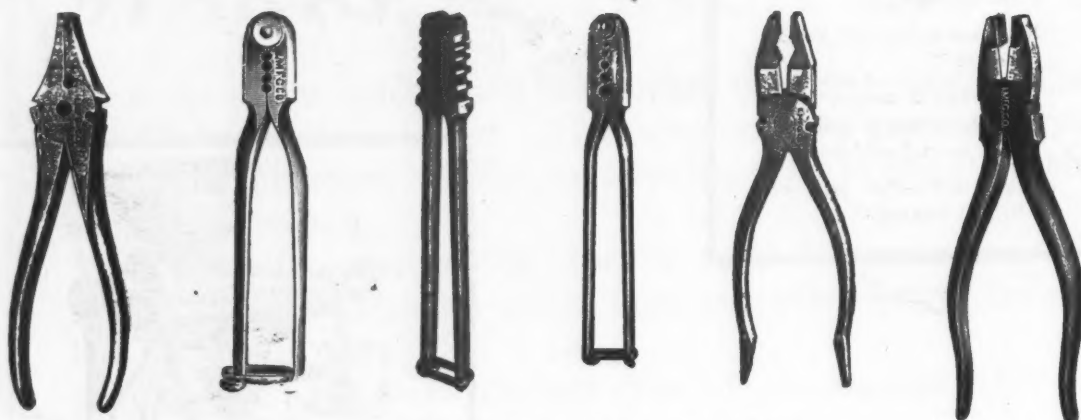
Pittsburgh,  
Pennsylvania

(Patent Applied For)

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A FEW OF THE TOOLS WE MAKE

*Write for Catalogue Showing Full Line*

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Special Double  
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Quick Shipments Every Business Day of the Year

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**AutoStrop Safety Razor Co.,**

*Manufacturers*

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**WIEBUSCH & HILGER, LTD.,**

*Special Distributors to the Jobbing Trade*

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**Any man with  
Common Sense inside  
 and  
 a Beard outside knows—**

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3. That to change the blade after each shave is expensive and troublesome.
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Standard Set as illustrated, consists of Quadruple Silver-Plated Self-Stopping Razor—12 AutoStrop Blades—One Horse Hide Strop—All in Handsome Compact Leather Case—Size,  $2\frac{1}{8}$  x 3 inches.



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CELEBRATED in all countries for their EXCELLENCE and DURABILITY

The Original Manufacturers of Hollow Ground Razors, and the SOLE MANUFACTURERS for upwards of a century of the Celebrated

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**WADE & BUTCHER  
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Which are superior to all others Manufactured Each Razor is set ready for use and warranted to shave to perfection.  
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Also STICKING, SKINNING, RIBBING and BONING Knives

BLADES made from BEST SHEAR STEEL

Hand forged and tempered by the most skilled Sheffield workmen.

Every blade ground to hold a lasting edge.

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CUT OF 8-INCH BLADE, ROSEWOOD HANDLE, BRASS SAW SCREW FASTENING

**MADE IN SHEFFIELD, ENGLAND**

**H**AMMERED OUT OF THE BAR BY HAND, IN THE OLD FASHIONED WAY, the only one that unites the skill of the mechanic with his work. The hand hammer strikes blows of varying force, heavy and light, suited to the work. **THE WORTH KNIFE HAS A BALANCE AND "HANG" NOT FOUND IN ANY OTHER BUTCHER KNIFE AND THE EDGE IS UNSURPASSED.**

*As we are the Sole American Agents for this line, we can make the trade an attractive agency proposition.*

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**It Pays the Dealer a Profit**

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*Free Samples will emphasize this*



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REPRESENT  
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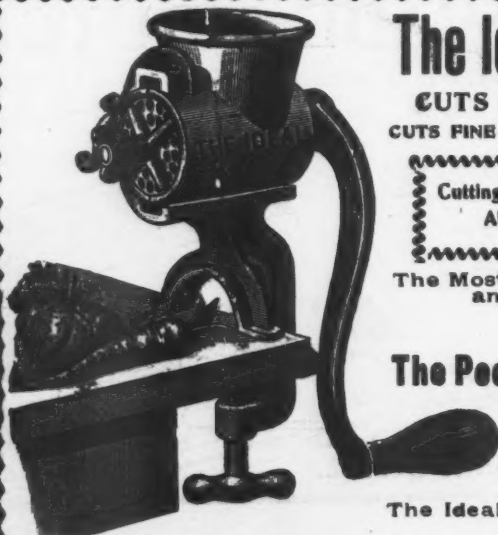
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Cutting Parts are of Tempered Steel.  
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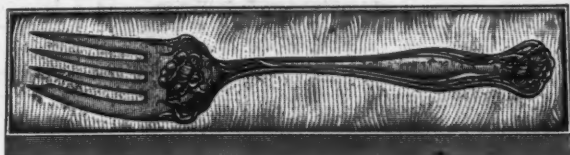
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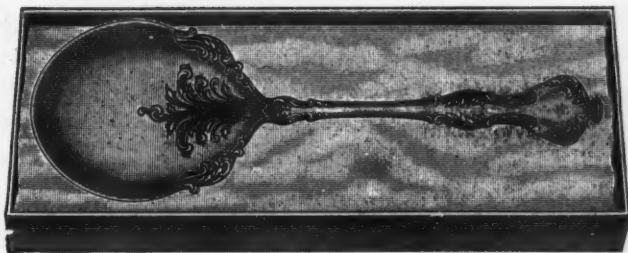
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**SNELL'S KING BIT**

King of them all! Fast cutting, easy boring, quick selling and has that fullness of Snell quality which makes it distinctly desirable.

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The GENUINE have RUSSELL JENNINGS stamped in full on the round of each Bit.

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FOR SALE BY ALL HARDWARE JOBBERS

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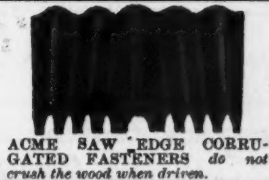
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Parallel or divergent corrugations  
Plain Edge or saw tooth edge  
Packed in cartons of 500 and 1000

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Guaranteed.  
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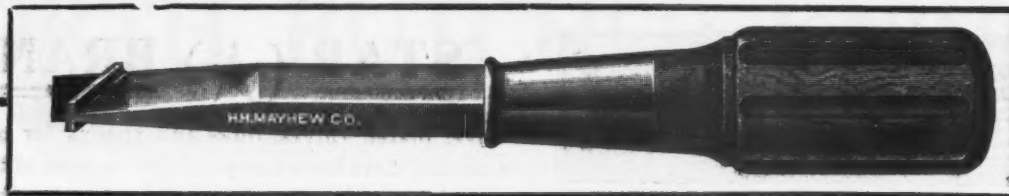
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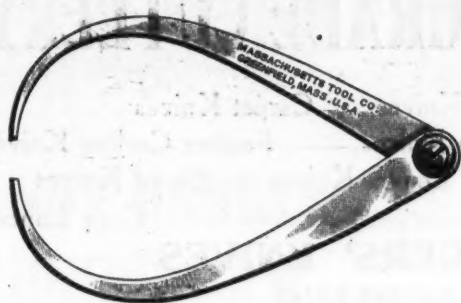
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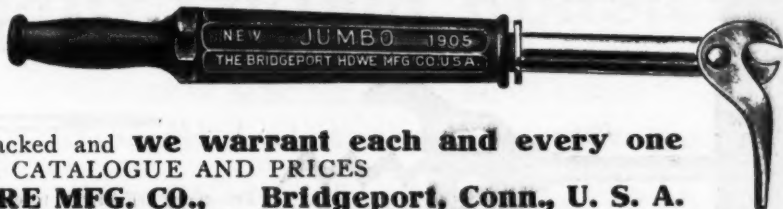
Our Entire Line of Pullers

are carefully tested before they are packed and **we warrant each and every one**

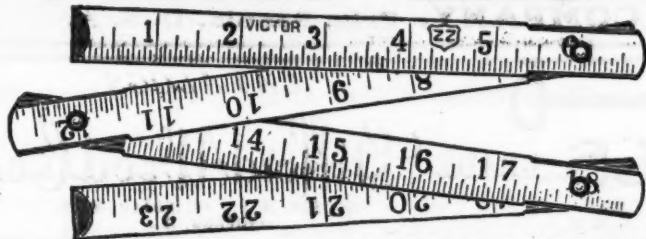
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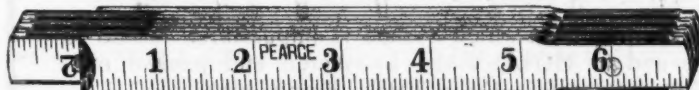
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TOOL CHESTS; all sizes, complete with tools, for Boys Youths, Gentlemen, Farmers Railroads and Carpenters use; also Tool Cabinets, Machinists' and Pipe Fitters Empty TOOL CHESTS. Agents for Steel Tool Chests.

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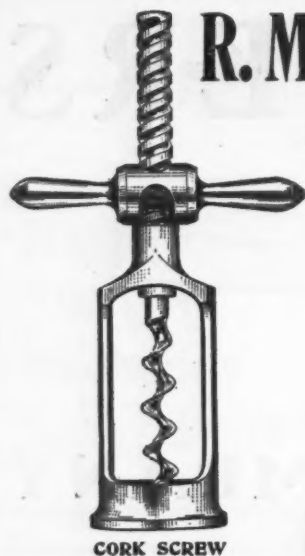
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COAL and ICE  
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The cheapest practical tool of the kind  
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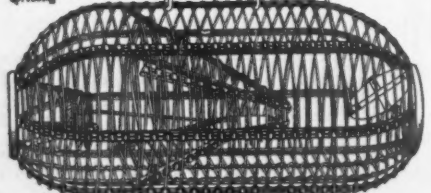
Handy for Engineers,  
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The double metal rib  
prevents wires from  
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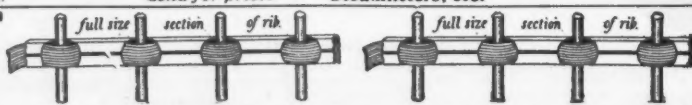
The points extend  
below the till, prevent  
rats escape

Safety door is opened  
from the top.



"Hold-'Em"

Patent Applied For.  
Double Metal Rib French  
RAT TRAP.



This is the trap from which escape is impossible. Made to catch rats and to HOLD-'EM. Lacquered and packed one-half doz. in each crate. Costs little. Profits high.

Send for prices. Special prices to Jobbers.

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LIGHT;  
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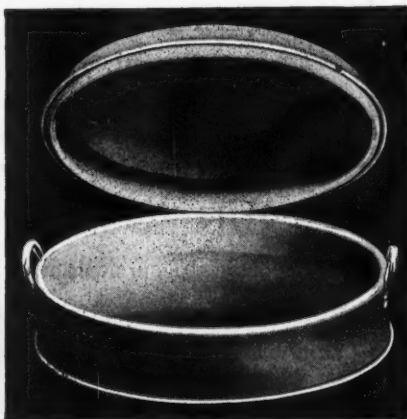
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**HANDY HANDLE  
PRUNING-SAW  
No. 18**

The blade is convex and concave in shape. Toothed on convex edge for a thrust cut, on concave edge for a draw cut, adapted for pruning trees and vines.

**HAND SAWS A SPECIALTY**



## Baby Corona Roaster

Our new size for gasoline or other  
**SUMMER OVENS** is now ready.

It is exactly like the larger size,  
oval, one piece of steel.

**The Enterprise Enamel Co.**

Bellaire, Ohio

### HERE'S A SNAP FOR WIDE-AWAKE RANGE DEALERS



I am going to sell 1000 400-lb. six-hole steel ranges finished in Japan for not over

**\$15.00 Each**

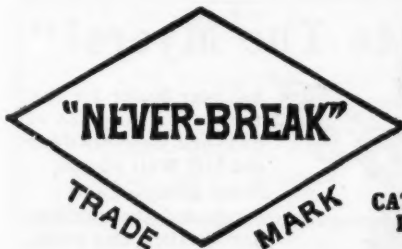
I'll sell the ranges too, so you'd better get in line and order now. These ranges formerly retailed at \$60.00 each. Send me a carload order and get my best cash discount or I'll give dating to firms with satisfactory credit. What better proposition can you ask for, if you have a little capital, are sufficiently enterprising, and want to make money? **Do You Know** there is a big demand for the "Willard" Steel Ranges because they give perfect satisfaction, and don't cost too much? Then why don't you supply them?

#### WILLARD STEEL RANGES

are advertised in many leading publications, and the people know them and want them. Get my prices—it means profit—DOLLARS—to you. Every sale leads to another. I can sell you a better range than you can buy ANYWHERE for the money, one that cooks well and bakes evenly and perfectly, and will last a lifetime, with proper care. **Tell me how many ranges you can sell annually** and I will make you a very interesting proposition.

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**WM. G. WILLARD, No. 5 Willard Bldg., 320 Chestnut St., ST. LOUIS, MO.**



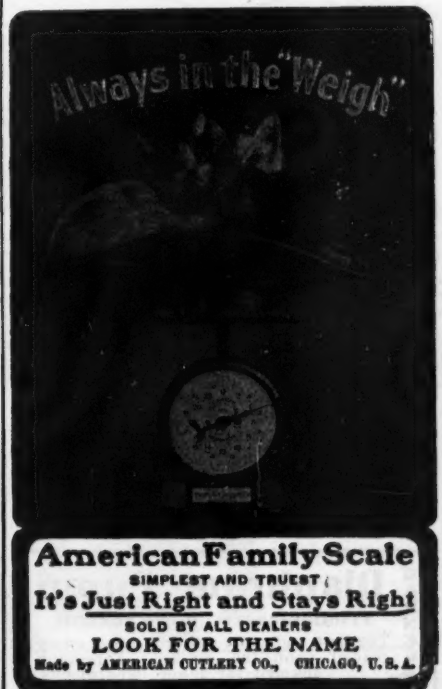
**"NEVER-BREAK" COOKING UTENSILS** Will Not Scale Off like Cheap Enamel—Will Not Scorch or Burn like light fry-pans and skillets—Will Not Absorb Grease or Flavors like Cast Iron. In a word **"HYGIENIC"** is the condition and **"HEALTH"** the result when using

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**The AVERY STAMPING CO.,**  
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All imitations  
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### HAYES PUMPS

are the most complete line of hand and windmill pumps made.

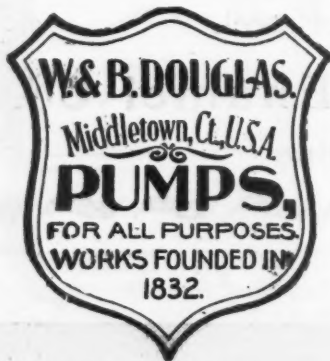
They give satisfaction to the purchaser, make more sales and bigger profits for the dealer.

You should have our catalog. Write for it now, to-day.

HAYES PUMP and PLANTER CO.  
Galva, Illinois.

The Cylinder  
that  
Never Fails

Hayes Double-Cylinder Pump.



## BUCKEYE PUMPS

THE RELIABLE KIND

Easy Working—Double Acting  
Anti-Freezing

All Buckeye Pumps are made with our Patented Poppet Valves and Brass Valve Seats and are guaranteed to give complete satisfaction.

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## Diaphragm Pump

Frictionless Non-Chokable

The best and most efficient hand pump placed upon the market. Especially adapted for sewer departments, for pumping drainage or sewerage matter, sanitary deposits, mud, gravel, quicksands, etc. Power attachment can be easily applied. We also manufacture a large line of high grade white enameled kitchen sinks. Write for Catalog "C."



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# Pittsburgh Steel Co.

Pittsburgh, Pa.

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On account of the joint, welded by electricity, no fence user will ever mistake "Pittsburgh Perfect" that he sees as he drives along the road for any other make, while none but a well posted fence man can distinguish between the various styles of wrapped or clamped fence. Therefore, every sale you make of "Pittsburgh Perfect" is a sign board for you and you only, and when you call your customers' attention to the great number of points of superiority over any and all of the other wrapped and clamped fences, you are not helping your competitors to sell their fences, but the whole force of your argument goes forth to your individual benefit as far as fence sales in your territory are concerned, because "Pittsburgh Perfect" is the only welded fence.

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Prominent among our brands of barb wire are our "Pittsburgh Perfect," 2-point flat barb; and our "Keystone Glidden," 2-point round barb. We also make 4-point barb wire. All of the above in galvanized or painted, hog or cattle.

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The heads of our nails are well supported by a process of manufacture that is based on a scientific principle of strength. All the principal sizes and styles are made on machines which are of the very latest and most approved type.

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Hoops for cooperage purposes, cut to lengths, with ends rounded, flared and punched. Special care is used in rolling this material true to width and gauge.

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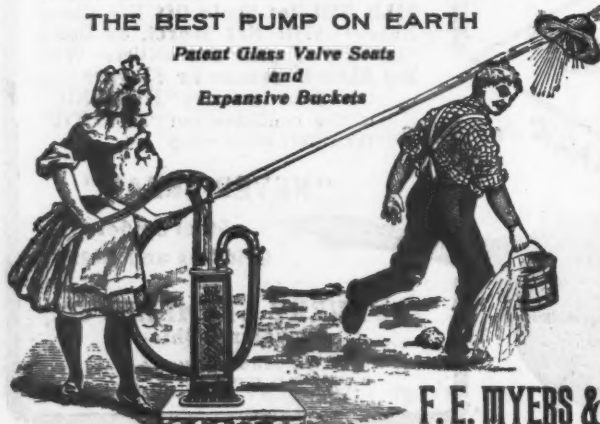
Arrow Cotton Ties are evenly rolled, full weight, supplied with substantial buckles, are thoroughly japanned and bound with strong bands to prevent breakage in transit.

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THE BEST PUMP ON EARTH

Patent Glass Valve Seats  
and  
Expansive Buckets



Ask your Dealer for the most satisfactory line of Hand and Windmill Force and Lift Well Pumps, Power Pumps, Tank Pumps and Spray Pumps, Hay Carriers, Hay Forks, Hay Rack Clamps, Station Door Hangers, etc., manufactured by the largest Pump and Hay Tool Works in the World. Write for descriptive circulars. The RIGHT time to write is RIGHT now.

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H704

## "Humphryes" Hand and Power; Iron and Brass Rotary Pumps

FOR PUMPING HOT AND COLD WATER, ACIDS, BEER AND WINES, OIL, ETC., ARE UNEXCELLED.

¶ H704 illustrates our Rotary Force Pump adapted for power, being mounted on a suitable frame or bed-plate and provided with tight and loose pulleys. It is finished in bronze for pumping acids and fitted with metallic valves for hot liquids. ¶ Ask for our catalog illustrating Pumps For Every Service.

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ARE EASY WORKING, COMPACT and SUBSTANTIAL, WELL ADAPTED FOR HOUSE PUMPING—FURNISHING WATER EITHER AT SPOUT OR THROUGH OPENING AT BACK.

We manufacture a large line of House Force Pumps. Write for complete Catalog.

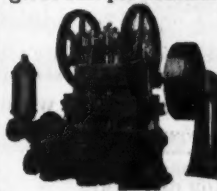
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**TANK LUGS**

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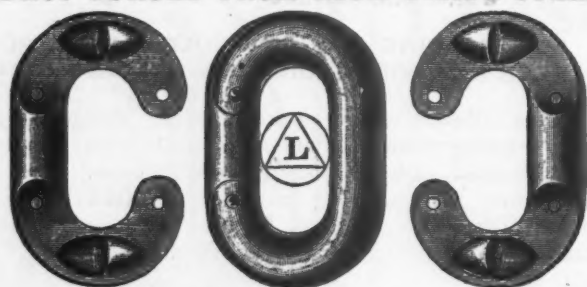
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DROP FORGED FROM HIGH GRADE STEEL



Patented November 8, 1904.

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**TABLE OF LINK TESTS**

MADE BY U. S. GOVERNMENT

Compared with Strength of Proof Chain.

* Size	Proof Chain	"Missing Link"
$\frac{1}{2}$ inch	2,500 lbs.	5,580 lbs.
$\frac{3}{4}$ "	5,000 "	8,300 "
1 "	8,000 "	11,200 "
$\frac{1}{2}$ "	11,000 "	13,980 "
$\frac{3}{4}$ "	13,000 "	15,900 "
1 "	20,000 "	20,000 "
$\frac{1}{2}$ "	22,000 "	23,900 "
$\frac{3}{4}$ "	24,000 "	27,300 "
$\frac{1}{2}$ "	29,000 "	34,100 "
$\frac{3}{4}$ "	37,000 "	37,100 "
1 "	44,000 "	52,600 "

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Because the strain comes on two points instead of one. Send for catalogue and get the other points.


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*Hardware Chain, Ship Chain, Railroad Chain,  
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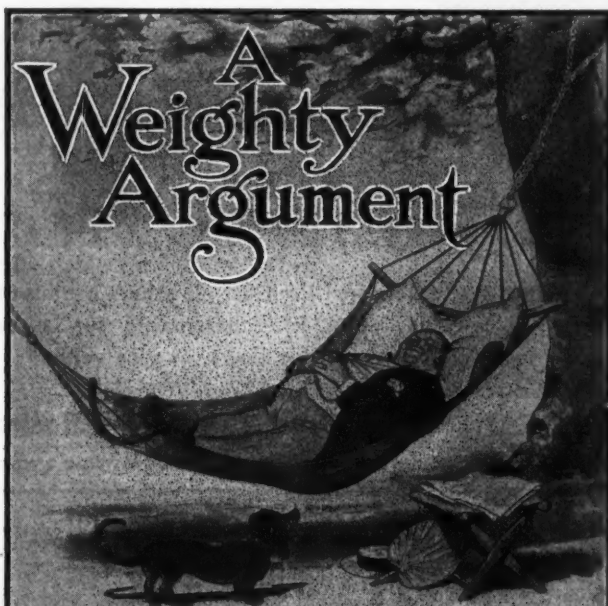
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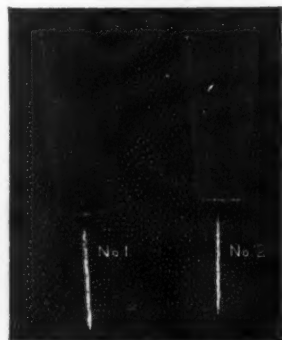
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**GALVANIZED**  
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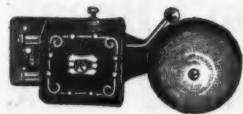
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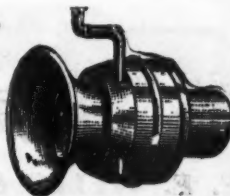
These will give perfect satisfaction to your customers.  
 Made in two sizes at the following prices:  
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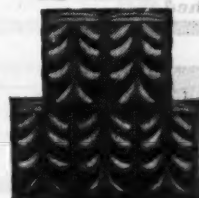
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**Not the Cheapest but the Best. Stronger** and will outlast all others because the frame is drop-forged from steel and has no thread to wear out. A case hardened, interchangeable nut is used instead. Can be changed from a Roll to a three-wheel cutter by substituting wheels for Rolls, or vice versa.

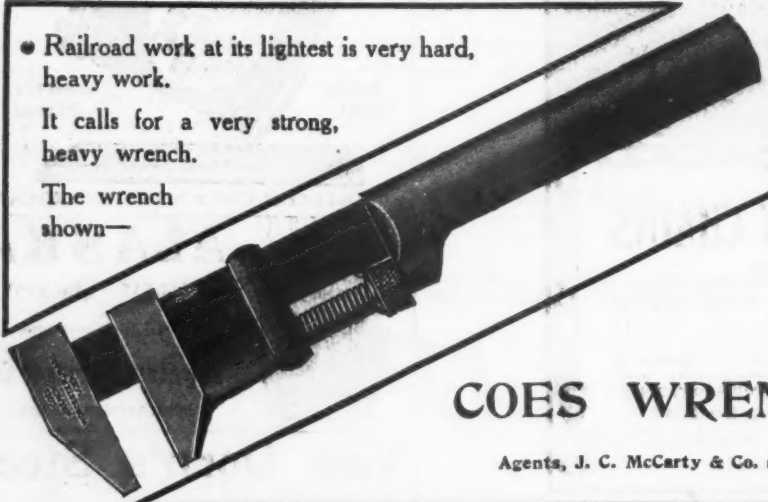
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• Railroad work at its lightest is very hard, heavy work.

It calls for a very strong, heavy wrench.

The wrench shown—



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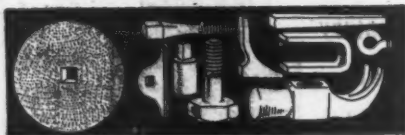
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Let us know your requirements and we will select the grit just suited to your work.

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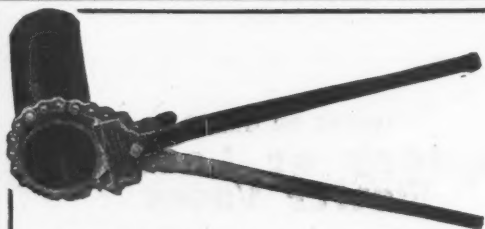
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Carried in Stock  
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Duplex Wrenches cost no more than others, and are superior to them in construction and workmanship. Have hand made chains, allowing greater encircling contact on the pipe than other makes, thereby reducing to a minimum the liability to crush it.

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**Jaw that**

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**RATCHET  
WRENCHES**

ALL SIZES

Single

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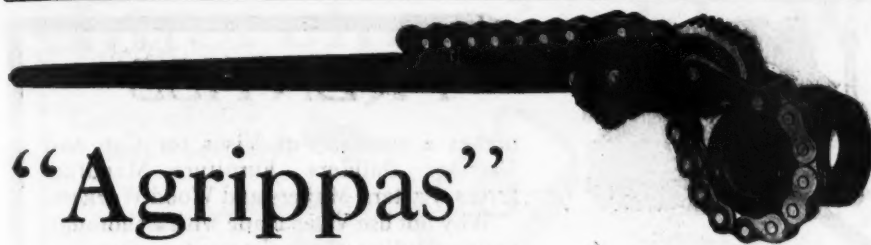
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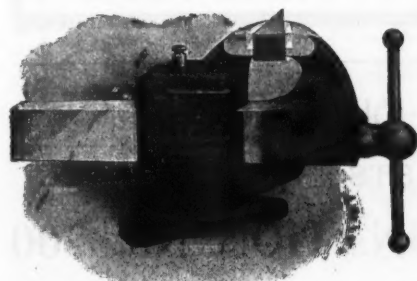


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THE first thing you'll notice when operating an "Agrippa" Chain Wrench is the comparatively quick and easy movement of pipe or fittings. The chain "hug" is perfect—almost a complete circle—and makes a grip as true as that of the hand. This effective principle is not found on other chain tools. "Agrippa" chain only is suspended and fastened to permit this strong-action principle. Getting everywhere with one Jaw, doing everything with one Jaw and doing that with relative ease ought to commend "Agrippa."



Automatic Swivel with Self-Adjusting Jaw.

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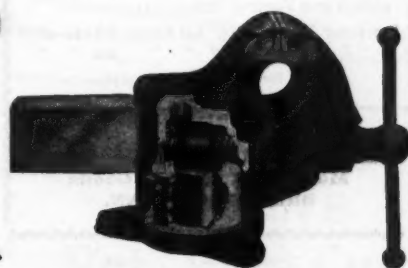


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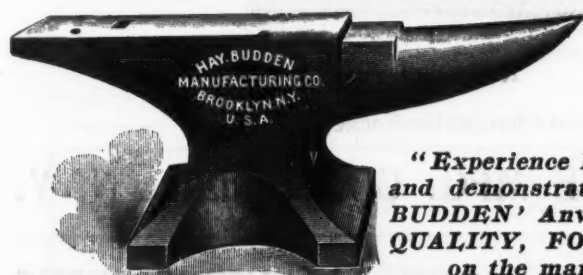
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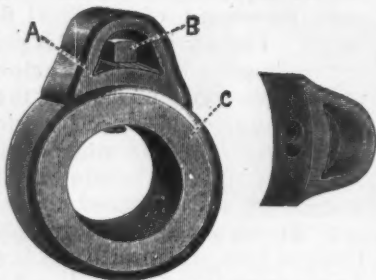
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A—Rubber Protector. B—Head of Set Screw  
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It is made of specially prepared rubber and will last for years. Can be applied by any workman, elasticity of the rubber being utilized to hold it in place over the screw. Highly commended by the Liability Companies and Factory Inspectors.

Protector for  $\frac{3}{8}$ " or  $\frac{1}{2}$ " Set Screw, 20 cts. each  
" "  $\frac{5}{8}$ " " " " " 30 " "

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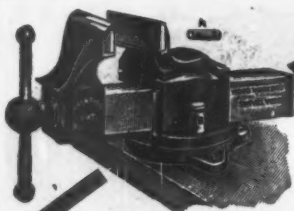
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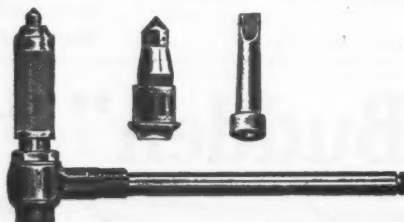
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RATCHETS

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Jaws  
10" or 7"

New Catalog on Vises

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UTICA TOOLS are the BEST. They cut easier and wear longer than any other make. **ASK YOUR DEALER FOR THEM.**

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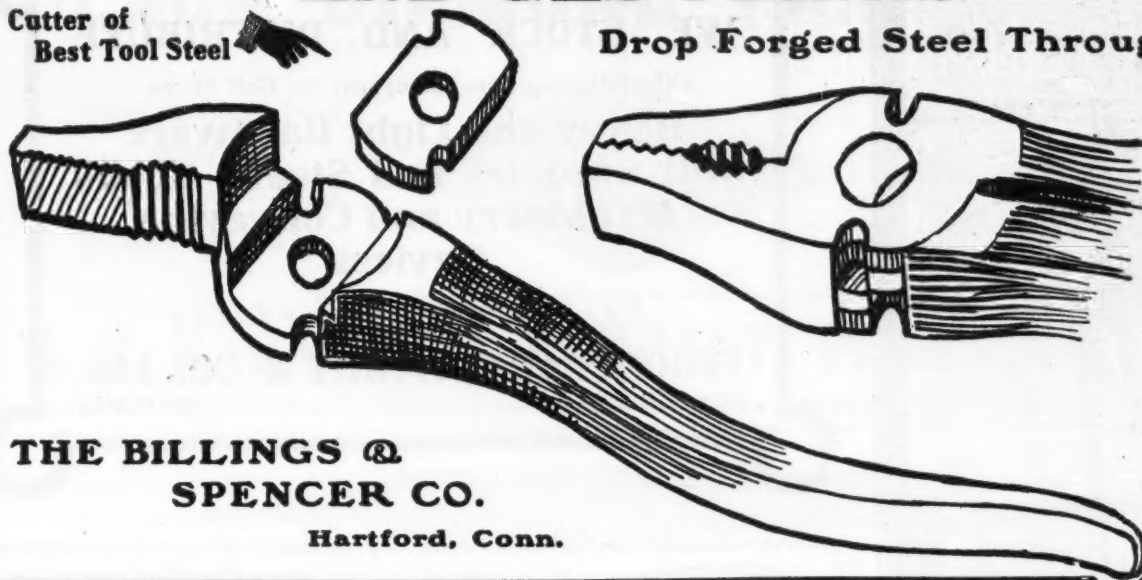
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# Interchangeable Wire Cutters AND GAS PLIERS

Cutter of  
Best Tool Steel

Drop Forged Steel Throughout



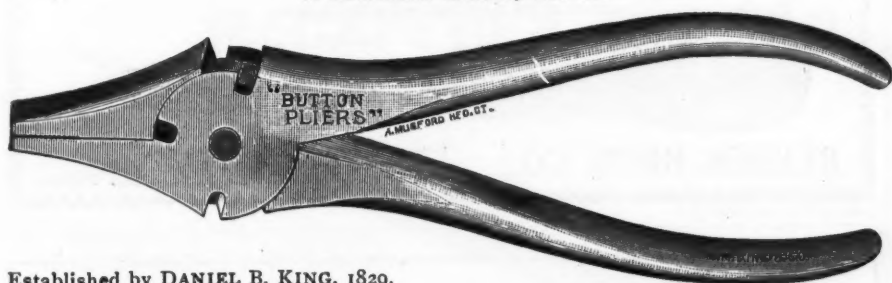
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The Hayden Patent Combined Wire Cutter and Gas Pliers are strong and serviceable, the handles being forged heavy and stiff, so that there is no spring in them as in the case of light forged or malleable iron Pliers. The Cutters are easily inverted. Get our General Catalog.

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Straightens wire  
from No. 8 to No.  
20. It is 14 inches  
long, 4 1/2 high and  
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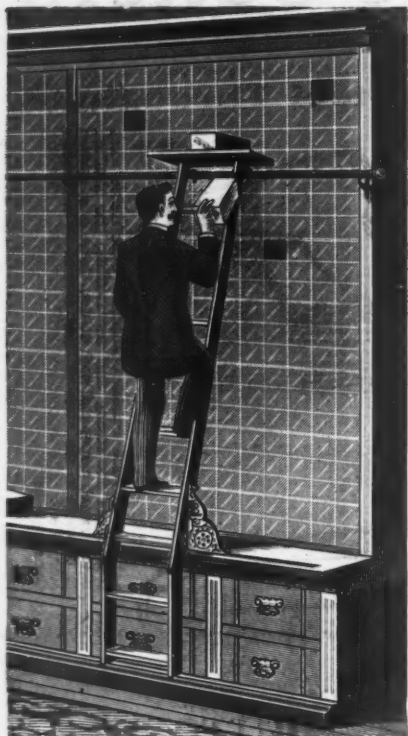


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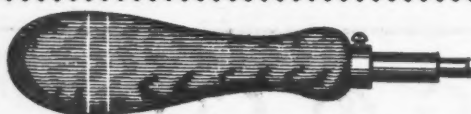
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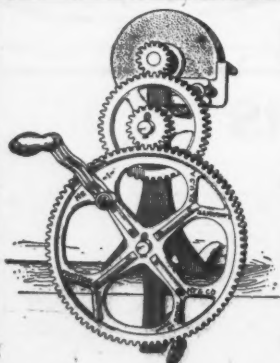
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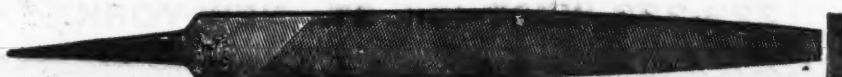


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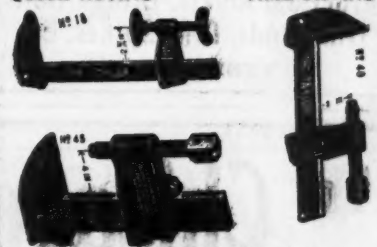


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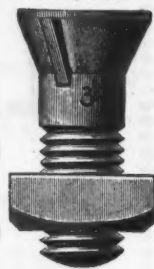
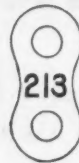
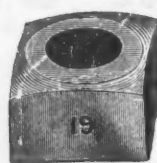
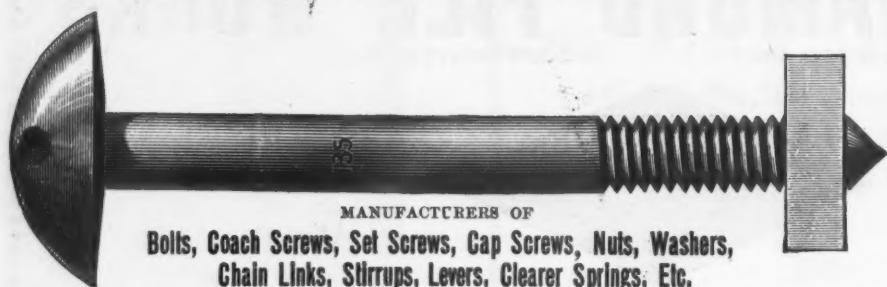
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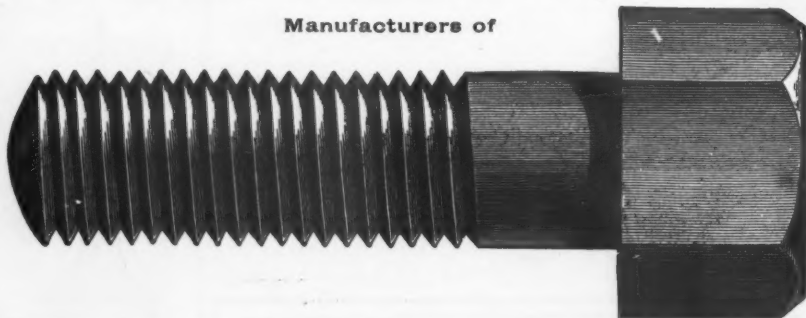
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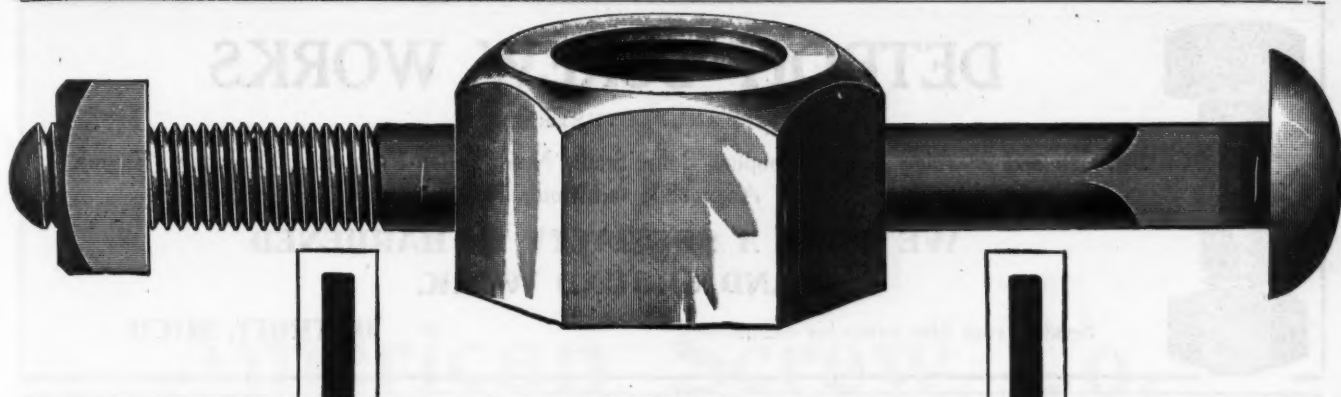
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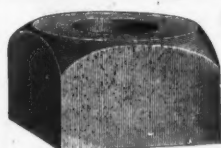
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which are made of steel, thus avoiding  
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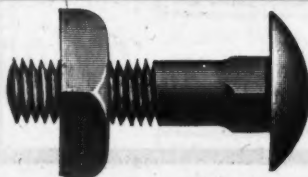


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$\frac{1}{4}$ -in. and larger, four side expansion.

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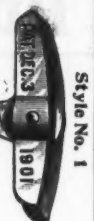
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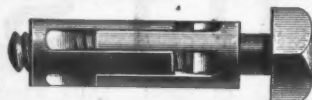


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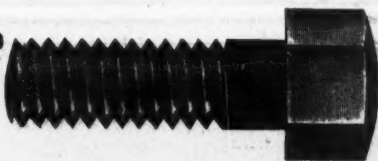
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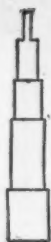
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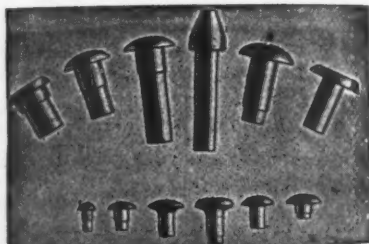
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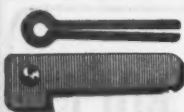
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**H**ave the largest plant of its kind  
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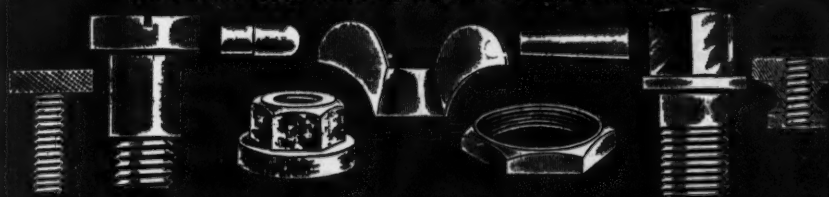
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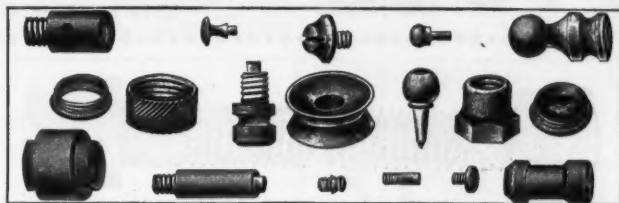
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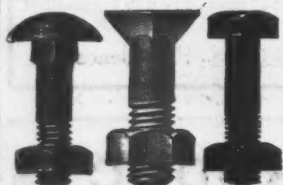


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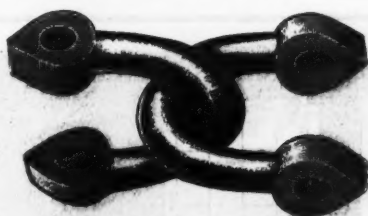
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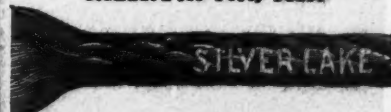
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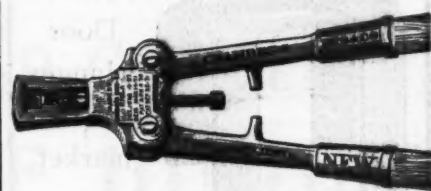
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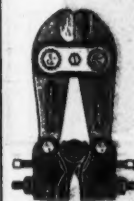
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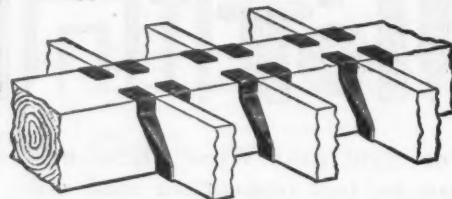


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## NEY'S HINGE HANGER



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The  
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Hinge  
Barn  
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Hanger  
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Runs on roller bearings, noiseless, and without friction. Has a Screw Adjustment which holds the door rigidly in its place.

Swings the door out at right angles better than any other Swing Hanger.

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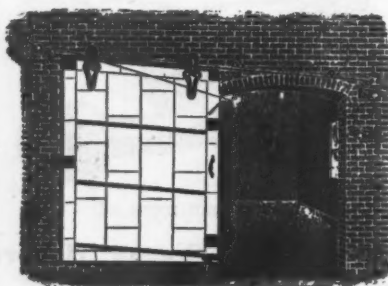
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With steel roller bearings, easy to push and pull, cannot be thrown off the track, still is flexible. Mechanically perfect, yet simple in construction. Fitted with  $\frac{3}{4}$  inch wheels. Track of double strength of others and reversible. Has the special feature of vertical and lateral adjustment.

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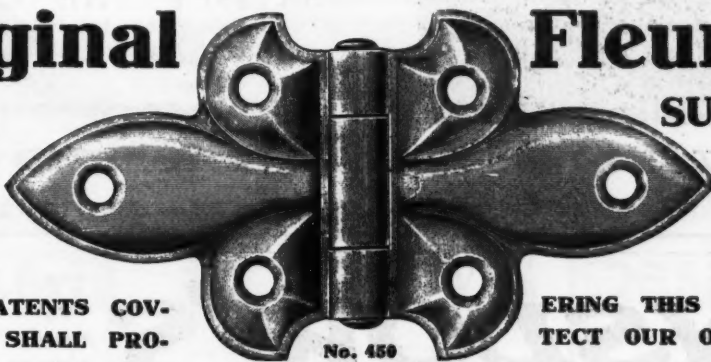
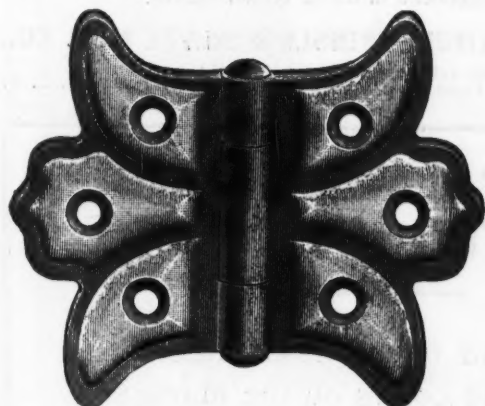
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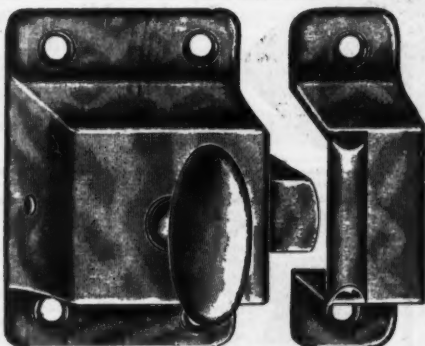
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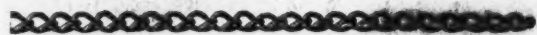
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Ladder Chain. Cable Chains  
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Universal Double-Jointed Chains

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ROLLER BEARINGS  
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Combination Groove for Chain or Cord.

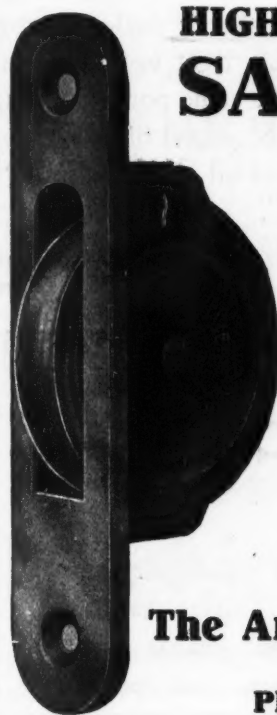
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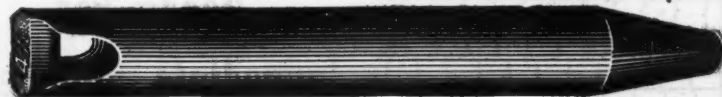
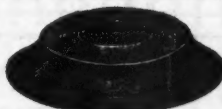
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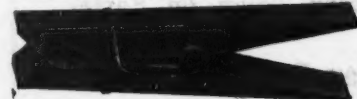
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Cast Iron Washers

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BUCHANAN FOUNDRY CO., - - - LEBANON, PA.



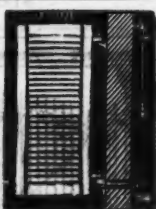
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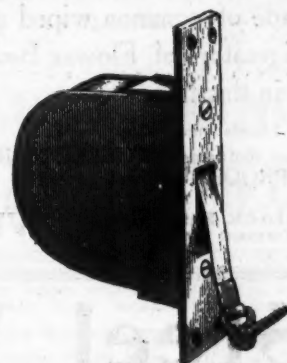


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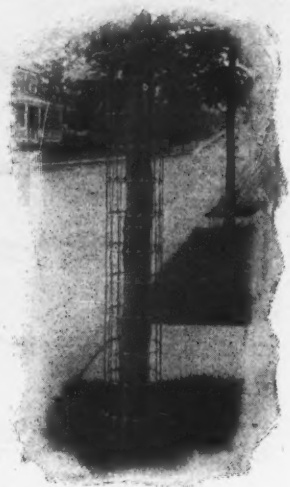
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Close Mesh Tree Guard  
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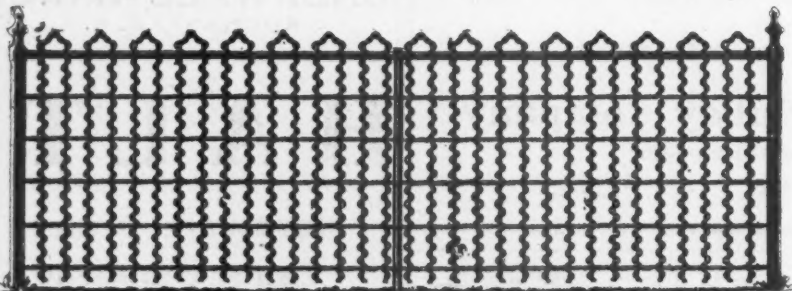
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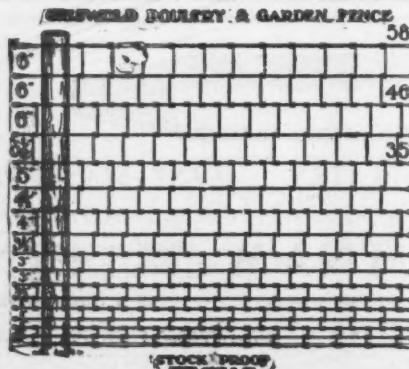
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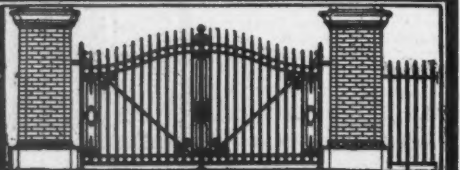
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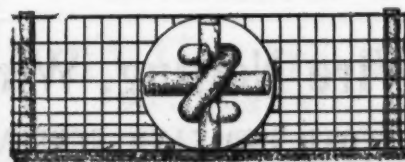
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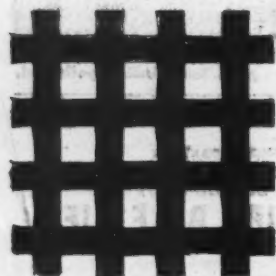
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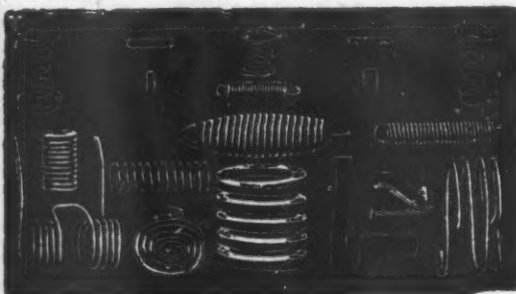
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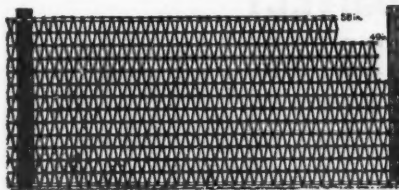
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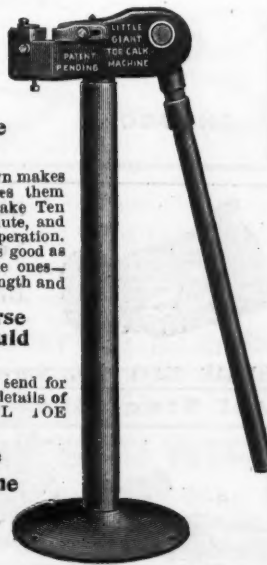
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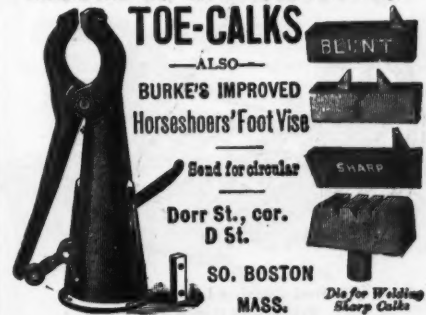
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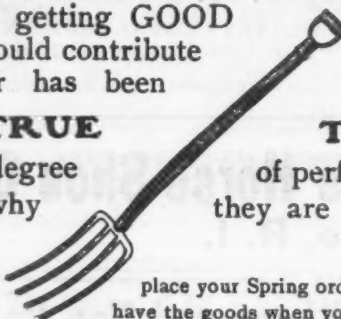


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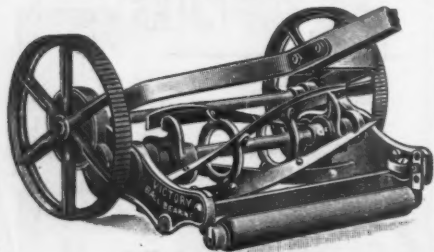
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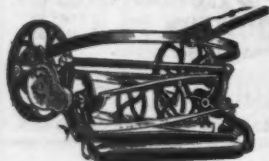
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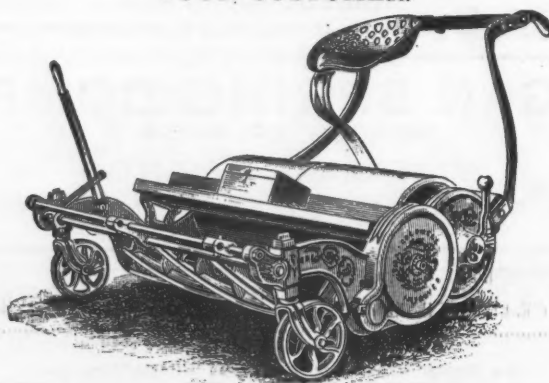
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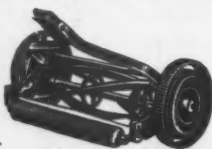
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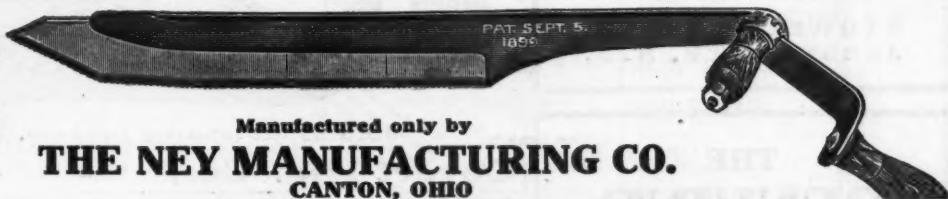
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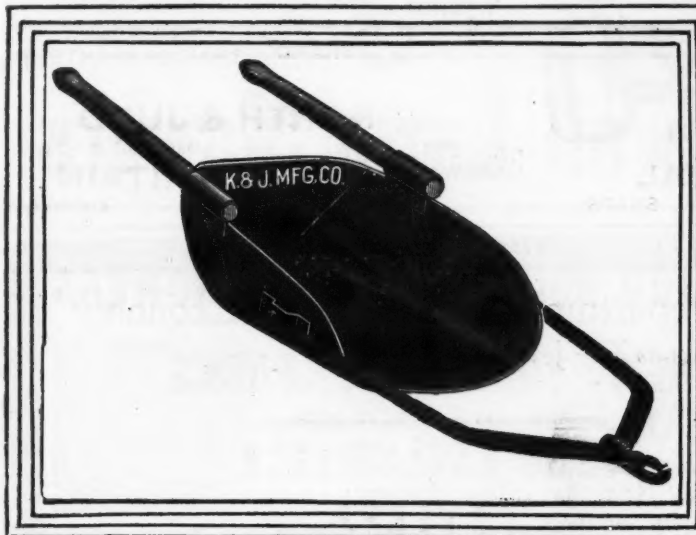
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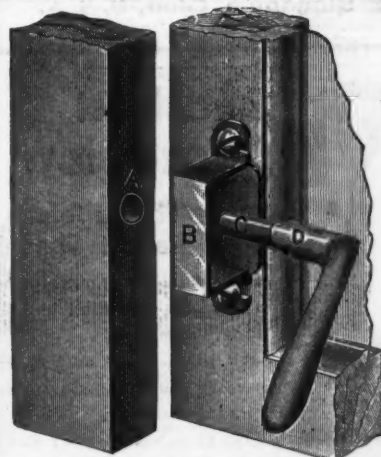
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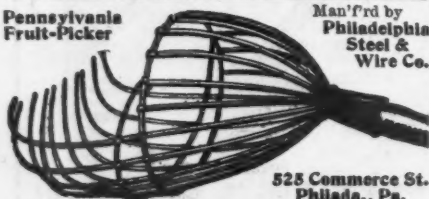
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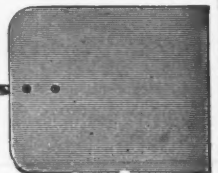
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Axle Cutting Off and Centering Machines

Fawcett Machine Co., Pittsburgh, Pa.

Axles, Car and Locomotive

Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

Axles, Wagon

Wurster, F. W., & Co., Brooklyn, N. Y.

Babbitt Metal

Clum & Atkinson, Rochester, N. Y.

Dodge Mfg. Co., Mishawaka, Ind.

Hertz, T. Metal Co., St. Louis, Mo.

Magnolia Metal Co., 113-115 Bank St., N. Y.

Merchant & Evans Co., Phila., Pa.

Pittsburgh White Metal Co., Pittsburgh, Pa.

Reeves, Paul S., & Son, Phila., Pa.

**Bale Ties**

Griswold Wire Co., Braddock, Pa.

Ohio Bale Tie Co., Cleveland, O.

**Ball Bearings**

Bantam Anti-Friction Co., Bantam, Ct.

Chapman Ball Bearing Co., Boston, Mass.

Pressed Steel Mfg. Co., Phila., Pa.

Standard Roller Bearing Co., Phila., Pa.

Naugatuck Mfg. Co., Naugatuck, Ct.

Balls, Steel

Chapman Ball Bearing Co., Boston, Mass.

Standard Roller Bearing Co., Phila., Pa.

Bank and Office Railing

Ester Wire Works Co., 59 Fulton St., N. Y.

Wright Wire Co., Worcester, Mass.

Bar Iron

Bourne-Fuller Co., Cleveland, O.

Barb Wire and Fence

American Steel & Wire Co., Chicago, Ill.

Pittsburgh Steel Co., Pittsburgh, Pa.

Youngstown Sheet & Tube Co., Youngstown, O.

Barbed Wire Machines

Emery, Wilber, Wilmington, Del.

Barrels, Pressed Steel

Pressed Steel Tank Co., Milwaukee, Wis.

Bars, Iron and Steel

American Iron & Steel Mfg. Co., Lebanon, Pa.

Bethlehem Steel Co., South Bethlehem, Pa.

Buell & Mitchell, 120 Liberty St., N. Y.

Buffalo Steel Co., Tonawanda, N. Y.

Burden Iron Co., Troy, N. Y.

Carnegie Steel Co., Pittsburgh, Pa.

Inland Steel Co., Chicago, Ill.

Interstate Iron & Steel Co., Chicago, Ill.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Lackawanna Steel Co., 2 Rector St., N. Y.

Lockhart Iron & Steel Co., Pittsburgh, Pa.

Milton Mfg. Co., Milton, Pa.

Nicetown Plate Washer Co., Philadelphia, Pa.

Republic Iron & Steel Co., Pittsburgh, Pa.

Standard Chain Co., Pittsburgh, Pa.

Base Ball Shoe Plates

Winslow, Sam'l, Skate Mfg. Co., Worcester, Mass.

Basic Open Hearth Billets

Andrews Steel Co., Newport, Ky.

La Belle Iron Works, Steubenville, O.

Basic Pig Iron

La Belle Iron Works, Steubenville, O.

Baskets, Refrigerator

Burlington Basket Co., Burlington, Ia.

Beam Shears

Fels, Henry, & Co., 66-68 Broad St., N. Y.

Beams, Channels and Angles

Buell & Mitchell, 120 Liberty St., N. Y.

Buffalo Steel Co., Tonawanda, N. Y.

Carnegie Steel Co., Pittsburgh, Pa.

Columbia Steel & Shafting Co., Pittsburgh, Pa.

Inland Steel Co., Chicago, Ill.

Interstate Iron & Steel Co., Chicago, Ill.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Lackawanna Steel Co., 2 Rector St., N. Y.

North Works, Illinois Steel Co., Chicago, Ill.

Phoenix Iron Co., Phila., Pa.

Pierson & Co., 29 Broadway, N. Y.

Republic Iron & Steel Co., Pittsburgh, Pa.

Ryerson, Jos. T., & Son, Chicago, Ill.

Scully Steel & Iron Co., Chicago, Ill.

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Bellows

Scott, Geo. M., Chicago, Ill.

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Bevin Bros. Mfg. Co., East Hampton, Ct.

Belt Dressing

Dixon, Jos., Crucible Co., Jersey City, N. J.

Schieren, Chas. A., Co., 37 Ferry St., N. Y.

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Crescent Belt Fastener Co., 143 E. 23d St., N. Y.

Flexible Steel Lacing Co., Chicago, Ill.

Belt Hooks

Bristol Co., Waterbury, Ct.

Talcott, W. O., Providence, R. I.

Upson Nut Co., Unionville, Ct.

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Birdsboro Steel Fdry. & Machine Co., Birdsboro, Pa.

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Belting

Ames Sword Co., Chicopee, Mass.

Gandy Belting Co., Baltimore, Md.

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Jeffrey Mfg. Co., Columbus, O.

Link-Belt Co., Phila., Pa.

Webster Mfg. Co., Chicago, Ill.

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N. Y. Leather Belting Co., 51 Beekman St., N. Y.

Schieren, Chas. A., Co., 37 Ferry St., N. Y.

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Robins Conveying Belt Co., Passaic, N. J.

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Robinson Tool Works, Waterbury, Ct.

Bench Grinding Machinery

Norton Grinding Co., Worcester, Mass.

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Niles-Bement-Pond Co., 111 Broadway, N. Y.

Wickes Bros., Saginaw, Mich.

Bicycle Bells—See Bells and Gongs

Bicycle Lamps

Bridgeport Brass Co., Bridgeport, Ct.

Plume & Atwood Mfg. Co., 29 Murray St., N. Y.

Bicycle Machinery

Garvin Mach. Co., 235 Spring, cor. Varick St., N. Y.

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Norvell-Shapleigh Hdw. Co., St. Louis, Mo.

Binder Twine

American Mfg. Co., 65 Wall St., N. Y.

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Millers Falls Co., 28 Warren St., N. Y.

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Bayley Mfg. Co., Milwaukee, Wis.

Boston Blower Co., Hyde Park, Mass.

Buffalo Forge Co., Buffalo, N. Y.

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De Laval Steam Turbine Co., Trenton, N. J.

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Dearborn Drug & Chemical Works, Chicago, Ill.

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Lukenheimer Co., Cincinnati, O.

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Lukens Iron & Steel Co., Coatesville, Pa.

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American Welding Co., Carbondale, Pa.

Boiler Shop Tools

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Boiler Tubes

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Horsburgh & Scott Co., Cleveland, O.

New Process Raw Hide Co., Syracuse,  
N. Y.

**Generators, Electric**  
Crocker-Wheeler Co., Amper, N. J.

Power Equipment Co., Chicago, Ill.

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burgh, Pa.

**German Silver**  
Seymour Mfg. Co., Seymour, Ct.

**Gigs**  
Pittsburgh Automatic Vise & Tool  
Co., Pittsburgh, Pa.

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Barrett, W. L., Bristol, Ct.

Utica Drop Forge & Tool Co., Utica,  
N. Y.

**Glass Cutting Boards**  
Lufkin Rule Co., Saginaw, Mich.

**Glazier Points**  
Shelton Co., Shelton, Ct.

**Glue**  
Baeder, Adamson & Co., Phila., Pa.

**Glue Hatters**  
Dart, E. M., Mfg. Co., Providence,  
R. I.

**Glue Pots, Portable**  
Stuart & Peterson Co., Burlington,  
N. J.

**Gongs—See Bells and Gongs.**

**Granite Workers' Tools**  
Trow & Holden, Barre, Vt.

**Grinders and Buffers, Elec-  
tric**  
Bridgeport Safety Emery Wheel Co.,  
Bridgeport, Ct.

Northern Electrical Mfg. Co., Mad-  
ison, Wis.

**Grinders, Motor Driven**  
Bridgeport Safety Emery Wheel Co.,  
Bridgeport, Ct.

Coates Clipper Mfg. Co., Worcester,  
Mass.

Hisey-Wolf Mch. Co., Cincinnati, O.

Ransom Mfg. Co., Oshkosh, Wis.



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Dienelt & Eisenhardt, Phila., Pa.  
Kiddler, R. E., Worcester, Mass.  
Long & Allstatter Co., Hamilton, O.  
Novelty Iron Works, Dubuque, Ia.  
Scranton & Co., The, New Haven, Ct.

**Hammers, Steam**  
Chambersburg Engineering Co., Chambersburg, Pa.  
Dienelt & Eisenhardt, Phila., Pa.  
Dudgeon, Richard, 24 Columbia St., N. Y.  
McDougall & Potter Co., 606-612 W. 55th St., N. Y.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., 111 Broadway, N. Y.

**Hammock Chains**  
Oneida Community, Ltd., Oneida, N. Y.

**Hammocks**  
Palmer, I. E., Co., Middletown, Ct.

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Osborn Mfg. Co., Cleveland, O.

**Handles, Wooden**  
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McKinney Mfg. Co., Pittsburgh, Pa.  
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National Mfg. Co., Sterling, Ill.  
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McCabe Hanger Mfg. Co., 425-427 W. 25th St., N. Y.  
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Dodge Mfg. Co., Mishawaka, Ind.  
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Graham, Jno. H., & Co., 113 Chambers St., N. Y.

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Supplee Hardware Co., Phila., Pa.  
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Hibbard, Spencer, Bartlett & Co., Chicago, Ill.  
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Ney Mfg. Co., Canton, O.  
Norvell-Shapleigh Hdw. Co., St. Louis, Mo.

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Delaware Marine Supply Mfg. Co., Wilmington, Del.  
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Advance Mfg. Co., Racine, Wis.  
Bergner Bros. Co., Phila., Pa.  
Enterprise Mfg. Co., of Pa., Phila., Pa.

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Schuchardt & Schutte, 136 Liberty St., N. Y.  
Wiebusch & Hilger, Ltd., 92 Walker St., N. Y.

**Hardware Marine**  
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**Hardware Specialties**  
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Advance Mfg. Co., Racine, Wis.  
Bergner Bros. Co., Phila., Pa.  
Enterprise Mfg. Co., of Pa., Phila., Pa.  
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Bishop, Geo. H., & Co., Cincinnati, O.

**Mining Screens**  
Harrington & King Perforating Co., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Howard & Moore, 45 Fulton St., N. Y.

**Miter Boxes**  
Millers Falls Co., 23 Warren St., N. Y.

**Molding Machines**  
Pridmore, Henry E., Chicago, Ill.

**Mops, Floor and Dish**  
Bay State Mop Co., Woburn, Mass.

**Motor Car Lamps**  
Dietz, R. E., Co., 69 Laight St., N. Y.

**Motors, Air**  
Stow Flexible Shaft Co., Phila., Pa.

**Motors, Electric**—See *Dynamos and Motors, Electric*.

**Nail Pullers**  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.  
Scranton & Co., The, New Haven, Ct.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Nails**  
American Steel & Wire Co., Chicago, Ill.

**Nails, Coated**  
Pearson, J. C., Co., Boston, Mass.

**Nails, Cobblers'**  
Shelton Co., Shelton, Ct.

**Nails, Galvanized**  
Keystone Nail Co., Pittsburgh, Pa.

**Nails, Small Cut**  
Shelton Co., Shelton, Ct.

**Natural Gas Pumps**  
Norwalk Iron Wks. Co., So. Norwalk, Ct.

**Nickel**  
Boker, Hermann & Co., 103 Duane St., N. Y.  
Pittsburg Tool Steel Wire Co., Monaca, Pa.

**Nickel Anodes**  
Seymour Mfg. Co., Seymour, Ct.

**Nippers**—See *Pliers and Nippers*.

**Nipples, Pipe**  
Standard Nipple Mfg. Co., Pittsburgh, Pa.

**Nuts**—See also *Bolts and Nuts*.  
Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
Boston Bolt Co., Boston, Mass.  
Garland Nut & Rivet Co., Pittsburgh, Pa.  
Graham Nut Co., Pittsburgh, Pa.  
Milton Mfg. Co., Milton, Pa.  
National Bolt & Nut Co., Pittsburgh, Pa.  
Rhode Island Tool Co., Providence, R. I.

**Oil and Grease Cups**  
Lunkenheimer Co., Cincinnati, O.

**Oil Filters**  
Burt Mfg. Co., Akron, O.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

**Oil Heaters**—See *Stoves, Oil Vapor and Gasoline*.

**Oil Separators**  
American Tool & Machine Co., Boston, Mass.

**Oil Stones**  
American Emery Wheel Works, Providence, R. I.  
Carborundum Co., Niagara Falls, N. Y.  
Norton Co., Worcester, Mass.

**Oil Stoves**—See *Stoves, Oil, Vapor and Gasoline*.

**Oil Tanks**  
Wilson & Friend Co., Chicago, Ill.

**Oilers**  
Am. Tube & Stampings Co., Bridgeport, Ct.  
Gem Mfg. Co., Pittsburgh, Pa.  
Hammer & Co., Branford, Ct.

**Oiling Devices**  
Lunkenheimer Co., Cincinnati, O.

**Oilless Bearings**  
North American Metaline Co., Long Island City, N. Y.

**Oils, Tempering**  
Cook, N. B., Oil Co., 148 Front St., New York.

**Ore Breakers**  
Cresson, Geo. V., Co., Phila., Pa.

**Ores**  
Samuel, Frank, Phila., Pa.

**Ovens, Core**  
Blodgett, G. S., Co., Burlington, Vt.

**Ovens, Enameling and Japanning**  
Blodgett, G. S., Co., Burlington, Vt.  
Cullum & Atkinson Co., Hartford, Ct.  
Steiner, Emil E., Newark, N. J.

**Packing**  
New York Belting & Packing Co., 91-93 Chambers St., N. Y.  
Stevens, Chas. L., & Co., Detroit, Mich.

**Packing, Iron**  
Smooth-On Mfg. Co., Jersey City, N. J.

**Padlocks**  
Eagle Lock Co., 105 Chambers St., N. Y.  
Yale & Towne Mfg. Co., 9-13 Murray St., N. Y.

**Paints and Varnish**  
Dixon, Jos., Crucible Co., Jersey City.

**Pants Stretcher**  
Covert Mfg. Co., Troy, N. Y.

**Patent Solicitors**  
Howson & Howson, Philadelphia and Washington.  
Stocking, E. B., Washington, D. C.

**Pattern Letters**  
Butler, A. G., 103 Beekman St., N. Y.  
St. Louis Electrotype Fdry., St. Louis, Mo.

**Pattern Shop Machinery**  
Fox Mch. Co., Grand Rapids, Mich.  
Oliver Mch. Co., Grand Rapids, Mich.

**Patterns**  
York Pattern Works, York, Pa.

**Perforated Metal**  
Clinton Wire Cloth Co., Clinton, Mass.  
Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Mundt, Chas., & Sons, Jersey City, N. J.

**Phosphor Bronze**  
Phosphor Bronze Smelting Co., Ltd., Phila., Pa.  
Reeves, Paul S., & Son, Phila., Pa.  
Riverside Metal Co., Riverside, N. J.

**Phosphor Tin**  
Champion, Phosphorized Metal Co., Phila., Pa.

**Phosphorizers**  
McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

**Picks, Mattocks and Grub Hoes**  
Hubbard & Co., Pittsburgh, Pa.

**Picks, Punches**  
Hubbard & Co., Pittsburgh, Pa.

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Columbus Iron & Steel Co., Columbus, O.  
Dimmick, J. K., & Co., Phila., Pa.  
Fennell, J. Brooks, & Co., Boston, Mass.  
Hickman, Williams & Co., Chicago, Ill.  
Hillman, J. H., & Son, Pittsburgh, Pa.  
Houston, C. B., & Co., Phila., Pa.  
Mudge, Edmund W., & Co., Pittsburgh, Pa.  
Potts & Wittman, Phila., Pa.  
Republic Iron & Steel Co., Pittsburgh, Pa.

**Pliers and Nippers**  
Rogers, Brown & Co., Cincinnati, O.  
Samuel, Frank, Phila., Pa.  
Snyder, W. P., & Co., Pittsburgh, Pa.  
Superior Charcoal Iron Co., Grand Rapids, Mich.  
Tenn. Coal, Iron & R. R. Co., Birmingham, Ala.

**Pipe Shoes**  
Janney, Steinmetz & Co., Phila., Pa.

**Pins, Taper**  
Hartford Machine Screw Co., Hartford, Ct.

**Pipe Bending Machinery**  
Stoeber Fdry. & Mfg. Co., Lebanon, Pa.  
Underwood, H. B., & Co., Phila., Pa.

**Pipe, Bent**  
National Pipe Bending Co., New Haven, Ct.  
National Tube Co., Pittsburgh, Pa.

**Pipe Coils, Iron, Copper and Brass**  
Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
National Pipe Bending Co., New Haven, Ct.  
Whitlock Coil Pipe Co., Hartford, Ct.

**Pipe Cutters**  
Barnes Tool Co., New Haven, Ct.  
Trimont Mfg. Co., Roxbury, Mass.

**Pipe Cutting and Threading Machines**  
Bignall & Keeler Mfg. Co., Edwardsville, Ill.  
Curtis & Curtis, Bridgeport, Ct.  
Hart Mfg. Co., Cleveland, O.  
Jarecki Mfg. Co., Erie, Pa.  
Loew Mfg. Co., Cleveland, O.  
Merrell Mfg. Co., Toledo, O.  
Saunders' Sons, D., Yonkers, N. Y.  
Standard Engineering Co., Ellwood City, Pa.  
Storer Fdry. & Mfg. Co., Lebanon, Pa.  
Wells Bros. Co., Greenfield, Mass.

**Pipe Fittings**  
Best Mfg. Co., Pittsburgh, Pa.  
Jarecki Mfg. Co., Erie, Pa.  
Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.

**Pipe Fittings, Open Hearth Steel**  
Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.

**Pipe Grips**  
Prentiss Vise Co., 44 Barclay St., N. Y.

**Pipe, Riveted Steel**  
Abendroth & Root Mfg. Co., Newburgh, N. Y.  
Amer. Spiral Pipe Wks., Chicago, Ill.  
Keeler, E. Co., Williamsport, Pa.  
Scalfe, Wm. B., & Sons Co., Pittsburgh.

**Pipe Straps**  
Loew Mfg. Co., Cleveland, O.

**Pipe, Water and Gas**  
American Cast Iron Pipe Co., Birmingham, Ala.  
La Belle Iron Wks., Steubenville, O.  
Lynchburg Fdry. Co., Lynchburg, Va.  
Miller, C. & Son Co., Utica, N. Y.  
National Tube Co., Pittsburgh, Pa.  
U. S. Cast Iron Pipe & Fdry. Co., 71 Broadway, N. Y.  
Wood, R. D., & Co., Phila., Pa.  
Youngstown Sheet & Tube Co., Youngstown, O.

**Pistols**  
Colt's Patent Fire Arms Mfg. Co., Hartford, Ct.  
Stevens, J., Arms & Tool Co., Chicopee Falls, Mass.

**Planers**  
American Tool Works Co., Cincinnati.  
Baird Machinery Co., Pittsburgh, Pa.  
Cincinnati Planer Co., Cincinnati, O.  
Cleveland Punch & Shear Wks. Co., Cleveland, O.  
Detrick & Harvey Mch. Co., Baltimore, Md.  
Flather, Mark, Planer Co., Nashua, N. H.  
New Haven Mfg. Co., New Haven, Ct.  
Niles-Bement-Pond Co., 111 Broadway, N. Y.  
Powell Tool Co., Worcester, Mass.  
Prentiss Tool & Supply Co., 115 Liberty St., N. Y.  
Vandyck-Churchill Co., 8 Dey St., N. Y.  
Whitcomb-Blaisdell Mch. Tool Co., Worcester, Mass.  
Wilson, W. A., Mach. Co., Rochester, N. Y.  
Woodward & Powell Planer Co., Worcester, Mass.

**Planers, Crank**  
Cincinnati Shaper Co., Cincinnati, O.

**Plate, Iron and Steel**  
Allegheny Steel Co., Pittsburgh, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Jones & Laughlin Steel Co., Pittsburgh, Pa.  
Lackawanna Steel Co., 2 Rector St., N. Y.  
Lukens Iron & Steel Co., Coatesville, Pa.  
North Works, Illinois Steel Co., Chicago, Ill.  
Otis Steel Co., Ltd., Cleveland, O.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Wood, Alan, Iron & Steel Co., Phila., Pa.

**Plated Ware**  
International Silver Co., Waterbury, Ct.

**Plating, Brass, Copper and Nickel**  
Cheney, S., & Son, Manlius, N. Y.  
Peckham, John A., New Haven, Ct.  
Williams Metal Stamping Co., Buffalo, N. Y.

**Platinum**  
Baker & Co., Inc., Newark, N. J.  
Bishop, J., & Co., Malvern, Pa.

**Pliers and Nippers**  
Field, A., & Co., 93 Chambers St., N. Y.  
King, J. M., & Co., Watford, N. Y.  
Kreuter & Co., Newark, N. J.  
Schuchardt & Schutte, 136 Liberty St., N. Y.  
Smith & Hemenway Co., 108-110 Duane St., N. Y.  
Utica Drop Forge & Tool Co., Utica, N. Y.

**Plumb Bobs**  
Starrett, L. S., Co., Athol, Mass.

**Plumbers' Supplies**  
Ireland & Matthews Mfg. Co., Detroit, Mich.

**Pneumatic Tools**  
Chicago Pneumatic Tool Co., Chicago.

**Pocket Knives**  
Boker, Hermann & Co., 103 Duane St., N. Y.

**Polishing Meal**  
Peckham Mfg. Co., Newark, N. J.

**Polishing Wheels and Blocks**  
Springfield Tire & Rubber Co., Springfield, O.

**Portable Cranes**  
Franklin Portable Crane & Hoist Co., Franklin, Pa.  
Nicholls, Wm. S., Hoosick Falls, N. Y.

**Portable Hoses**  
Portable Construction Co., 14 So. William St., N. Y.

**Portable Track**  
Atlas Car & Mfg. Co., Cleveland, O.  
Koppel, Arthur Co., Pittsburgh, Pa.  
Wiener, Ernst, Co., Broad and Beaver Sts., N. Y.

**Pots, Iron**  
U. S. Cast Iron Pipe & Fdry. Co., 71 Broadway, N. Y.

**Poultry Fencing**  
DeKalb Fence Co., DeKalb, Ill.  
Gilbert & Bennett Mfg. Co., 277 Broadway, N. Y.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
N. J. Wire Cloth Co., Trenton, N. J.  
Rochelle Wire Mfg. Co., Rochelle, Ill.  
Tyler, W. S., Co., Cleveland, O.  
Wright Wire Co., Worcester, Mass.





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Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Syracuse Chilled Plow Co., Syracuse, N. Y.

**Screen Door Checks**

Bardsley, Jos., 147-151 Baxter St., N. Y.  
Caldwell Mfg. Co., Rochester, N. Y.

**Screens, Machine**

Ohio Nut & Bolt Co., Berea, O.

**Screens, Perforated Metal**

Clinton Wire Cloth Co., Clinton, Mass.  
Erdle, Perforating Co., Rochester, N. Y.  
Harrington & King Perforating Co., Chicago, Ill.  
Heudrick Mfg. Co., Carbondale, Pa.  
Mundt, Chas., & Sons, Jersey City, N. J.

**Screw Drivers**

Billings & Spencer Co., Hartford, Conn.  
Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Duston, Henry & Sons, Inc., Philadelphia, Pa.

Goodell-Pratt Co., Greenfield, Mass.

Mayhew, H. H., Co., Shelburne Falls, Mass.

North Bros. Mfg. Co., Phila., Pa.

Snell Mfg. Co., Fiskdale, Mass.

Tuck Mfg. Co., Brockton, Mass.

**Screw Machine Products**

Barnes, Wallace, Co., Bristol, Ct.

Clark, A. N., & Son, Plainville, Ct.

Goodell-Pratt Co., Greenfield, Mass.

National-Acme Mfg. Co., Cleveland, O.

National Cycle Mfg. Co., Bay City, Mich.

National Sewing Mch. Co., Belvidere, Ill.

New Haven Machine Screw Co., New Haven, Ct.

Parker, John L., Co., Worcester, Mass.

Screw Machine Products Corp., Providence, R. I.

**Screw Machinery**

Brown & Sharpe Mfg. Co., Providence, R. I.

Garvin Machine Co., 25 Spring, cor. Varick St., N. Y.

Jones & Lamson Mch. Co., Springfield, Vt.

Pratt & Whitney Co., Hartford, Ct.

Universal Machine Screw Co., Hartford, Ct.

**Screw Machinery, Automatic**

Hartford Mch. Screw Co., Hartford, Conn.

National-Acme Mfg. Co., Cleveland, O.

**Screw Slotting Machines**

National-Acme Mfg. Co., Cleveland, O.

**Screws**

Bed  
Shelton Co., Shelton, Ct.

Coach.  
Hall's, Sam'l Sons, 229 W. 10th St., N. Y.

St. Louis Screw Co., St. Louis, Mo.

Galvanized  
Keystone Nail Co., Pittsburgh, Pa.

Machine.  
American Screw Co., Providence, R. I.

Anthony Screw Co., Worcester, Mass.

Atlas Bolt & Screw Co., Cleveland, O.

Blake & Johnson Co., Waterbury, Ct.

Chicago Screw Co., Chicago, Ill.

Detroit Screw Wks., Detroit, Mich.

Hartford Machine Screw Co., Hartford, Ct.

Haskell, Wm. H., Mfg. Co., Pawtucket, R. I.

Hubbell, Harvey, Inc., Bridgeport, Ct.

Miles, F. S., Co., 235 Quarry St., Phila., Pa.

National-Acme Mfg. Co., Cleveland, O.

National Sewing Mch. Co., Belvidere, Ill.

New Haven Machine Screw Co., New Haven, Ct.

Phila. Mach. Screw Wks., Phila., Pa.

Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.

Rhode Island Tool Co., Providence, R. I.

St. Louis Screw Co., St. Louis, Mo.

Smith, F. H., Mfg. Co., Chicago, Ill.

Worcester Mch. Screw Co., Worcester, Mass.

Wood.  
American Screw Co., Providence, R. I.

Eagle Lock Co., 105 Chambers St., N. Y.

**Seythe Stones and Whetstones**

Carborundum Co., Niagara Falls, N. Y.

Cleveland Stone Co., Cleveland, O.

**Seamless Steel Products**

Janney, Steinmetz & Co., Phila., Pa.

**Seamless Steel Tubes**

Irvine, Ellwood Tube Wks., Phila., Pa.

National Tube Co., Pittsburgh, Pa.

**Seamless Tubing**

Irvine, Ellwood Tube Wks., Phila., Pa.

**Sectional and Boiler Tube Cleaners**

Reversible Tube Cleaner Co., Worcester, Mass.

**Separators, Metal**

National Separator & Mch. Co., Concord, N. H.

**Separators, Steam and Oil**

Harrison Safety Boiler Works, Phila., Pa.

Hershey Mch. & Fdry. Co., Maunheim, Pa.

**Set Screw Protectors**

Candfield, H. O., Co., Bridgeport, Ct.

**Settees, Steel, Iron and Wire**

Stewart Iron Works Co., Cincinnati, O.

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**Shapers**

American Tool Works Co., Cincinnati, O.

Boynston & Plummer, Worcester, Mass.

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Gould & Eberhardt, Newark, N. J.

Niles-Bement-Pond Co., 111 Broadway, N. Y.

Potter & Johnston Machine Co., Pawtucket, R. I.

Prentiss Tool & Supply Co., 115 Liberty St., N. Y.

Stockbridge Mch. Co., Worcester, Mass.

Heppenstall Forge & Knife Co., iPittsburgh, Pa.

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**Shears and Scissors**

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Baker, Hermann, & Co., 103 Duane St., N. Y.

Bridgeport Hardware Mfg. Co., Bridgeport, Ct.

Heinrich, R., Sons Co., Newark, N. J.

Kastor, Adolph, & Bros., 109 Duane St., N. Y.

National Cutlery Co., Phila., Pa.

Norwell-Shapleigh Hdw. Co., St. Louis, Mo.

Waterville Cutlery Co., Waterville, Ct.

Wiss, J., & Sons Co., Newark, N. J.

Wiebusch & Hilger, Ltd., 92 Walker St., N. Y.

**Shears, Metal**

Armstrong-Blum Mfg. Co., Chicago, Ill.

Carlin's, Thomas, Sons Co., Pittsburgh, Pa.

Niagara Machine & Tool Wks., Buffalo, N. Y.

Schuchardt & Schutte, 136 Liberty St., N. Y.

United Engineering & Foundry Co., Pittsburgh, Pa.

**Shears, Sheep**

Columbian Cutlery Co., Reading, Pa.

**Sheathing**

Cabot, Samuel, Boston, Mass.

**Sheet and Bolt Copper**

Hungerford, U. T., Brass & Copper Co., 497 Pearl St., N. Y.

**Sheet and Tin Plate Bars**

Allegheny Steel Co., Pittsburgh, Pa.

Andrews Steel Co., Newport, Ky.

La Belle Iron Works, Steubenville, O.

Mudge, Edmund W., & Co., Pittsburgh, Pa.

**Sheet Metal Drawing**

Stearns, W. H., Stamping Co., Worcester, Mass.

Zephyr Ventilator Mfg. Co., Inc., Phila., Pa.

**Sheet Metal Machinery**

Adrian Mach. Wks., Brooklyn, N. Y.

Bliss, E. W., Co., Brooklyn, N. Y.

Ferracute Machine Co., Bridgeton, N. J.

Ohl, Geo. A., & Co., Newark, N. J.

**Sheet Metal Specialties**

Boston Pressed Metal Co., Worcester, Mass.

Gem Mfg. Co., Boston, Mass.

Geuder & Paeschke Mfg. Co., Milwaukee, Wis.

Ireland & Matthews Mfg. Co., Detroit, Mich.

Stimpson, Edwin B., Co., 31 Spruce St., N. Y.

Terrells Equipment Co., Grand Rapids, Mich.

**Sheet Zinc**

Illinois Zinc Co., Peru, Ill.

Matthiessen & Hegeler Zinc Co., La Salle, Ill.

**Sheets, Galvanized**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Empire Iron & Steel Co., Niles, O.

McCullough Iron Co., Wilmington, Del.

Newport Rolling Mill Co., Newport, Ky.

Niles Corrugating Co., Niles, O.

North Works, Illinois Steel Co., Chicago, Ill.

Parkersburg Iron & Steel Co., Parkersburg, W. Va.

Ryerson, Jos. T., & Son, Chicago, Ill.

Sully Steel & Iron Co., Chicago, Ill.

Seneca Iron & Steel Co., Buffalo, N. Y.

Stevens, Chas. G., Co., Chicago, Ill.

Wister, L. & R., & Co., Phila., Pa.

Wood, Alan, Iron & Steel Co., Phila., Pa.

Wood, J., & Bros. Co., Conshohocken, Pa.

Youngstown Iron & Steel Roofing Co., Youngstown, O.

Youngstown Sheet & Tube Co., Youngstown, O.

**Sheets, Pure Wrought Iron**

Empire Iron & Steel Co., Niles, O.

**Shelf Boxes**

Green, A. H., 97-101 Warren St., N. Y.

Heller, W. C., & Co., Montpelier, O.

Moore, C. P., Ravenswood, W. Va.

**Shelf Ladders**

Bicycle Step Ladder Co., Chicago, Ill.

Myers, F. E., & Bro., Ashland, O.

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Humphreys Mfg. Co., Mansfield, O.

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Crosby Co., Buffalo, N. Y.

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**Skates, Roller**

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**Skylights**

Drouse, G. Co., Bridgeport, Ct.

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**Slaters' Tools**

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**Smelter Blowers**

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American Specialty Co., Harvey, Ill.

**Soda Kettles**

Manufacturing Equipment & Engy. Co., Boston, Mass.

**Soldering Coppers**

Hungerford, U. T., Brass & Copper Co., 497 Pearl St., N. Y.

**Speaking Tubes**

Ostrander, W. R., & Co., 204 Fulton St., N. Y.

**Special Machinery**

Consolidated Press & Tool Co., Hastings, Mich.

Earle Gear & Machine Co., Phila., Pa.

Elmes, Chas. F., Engineering Works, Chicago, Ill.

Gardam, Wm., & Son, Inc., 221 Fulton St., N. Y.

Linch, E. P., Co., Waterbury, Ct.

Mossberg Wrench Co., Central Falls, R. I.

Richard Mfg. Co., Bloomsburg, Pa.

Sloan & Chace Mfg. Co., Newark, N. J.

Smith, Wm. J., Co., New Haven, Ct.

Torrington Mfg. Co., Torrington, Ct.

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Geuder & Paeschke Mfg. Co., Milwaukee, Wis.

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Illinois Zinc Co., Peru, Ill.

Matthiessen & Hegeler Zinc Co., La Salle, Ill.

Sandoval Zinc Co., Chicago, Ill.

Shimer, H. M., & Co., Phila., Pa.

**Snikes**

American Iron & Steel Mfg. Co., Lebanon, Pa.

Maryland Rail Co., Cumberland, Md.

**Spiral Gearing**

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**Spoons and Forks**

International Silver Co., Waterbury,



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Cammell, Laird & Co., 132 Front St., New York.  
Colonial Steel Co., Pittsburgh, Pa.  
Swedish Iron & Steel Co., 16 Exchange Pl., N. Y.  
Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.  
Wardlow, S. & Co., Sheffield, England.  
Wheelock, Lovejoy & Co., 23 Cliff St., N. Y.

**Steel, Hot and Cold Rolled Strip**  
Am. Tube & Stamping Co., Bridgeport, Ct.  
Columbia Steel Co., Elyria, O.  
Morris & Bailey Steel Co., Pittsburgh, Pa.  
Stevens, Chas. G., Co., Chicago, Ill.  
Superior Steel Co., Carnegie, Pa.  
West Leechburg Steel Co., Pittsburgh.

**Steel Importers**  
Baker, Hermann & Co., 103 Duane St., N. Y.  
Hobson, Houghton & Co., 1 Front St., N. Y.  
Jessop, Wm., & Sons, 91 John St., N. Y.  
Milne, A. & Co., 1 Broadway, N. Y.  
Wheelock, Lovejoy & Co., 23 Cliff St., N. Y.

**Steel Manufacturers**  
Am. Tube & Stamping Co., Bridgeport, Ct.  
Andrews Steel Co., Newport, Ky.  
Braeburn Steel Co., Braeburn, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Chester Steel Castings Co., Phila., Pa.  
Chrome Steel Works, Chrome, N. J.  
Colonial Steel Co., Pittsburgh, Pa.  
Farist Steel Co., Bridgeport, Ct.  
Hobson, Houghton & Co., 1 Front St., N. Y.  
Jessop, Wm., & Sons, 91 John St., N. Y.  
Lackawanna Steel Co., 2 Rector St., N. Y.  
Lukens Iron & Steel Co., Coatesville, Pa.  
North Works, Illinois Steel Co., Chicago, Ill.  
Osborn, Samuel, & Co., Boston, Mass.  
Republic Iron & Steel Co., Pittsburgh, Pa.  
Vulcan Crucible Steel Co. of Pittsburgh, Aliquippa, Pa.  
Wardlow, S. & Co., Sheffield, England.  
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# THE IRON AGE

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				Pittsburg Tool steel Wire Co.	28	Sigourney Tool Co.	82	Utica Drop Forge & Tool Co	143
				Pittsburgh Valve, Foundry & Construction Co.	59	Silver Lane Co.	150		
				Pittsburgh White Metal Co.	4	Silver Mfg. Co.	83		
				Plymouth & Atwood Mfr. Co.	2	Simmons Mfg. Co.	128		
				Plymouth Cordage Co. 122&130	86	Skinner Chuck Co.	75		
				Poo's Eng. & Mach. Co.	86	Slate, Dwight Mch. Co.	82		
				Portab's Construction Co.	172	Sleeth, Brook & Seaman Co.	185		
				Porter, H.K.	159	Slone & Chase Mfg. Co.	100		
				Portsmouth Forge	49	Slocumb, J.T. Co.	130		
				Potter & Johnston Mach. Co.	93	Smart, A.J. Mfg. Co.	80		
				Potts & Wittman	29	Smith, Thomas, Co.	8		
				Pott, Horace T. & Co.	34	Smith & Egge Mfg. Co.	169		
				Powell, Wm. Co.	56	Smith & Hemeway Co.	134		
				Power Tool Co.	100	Smith, Geo. A., Co.	8		
				Power Equipment Co. 112&115	77	Smith, F.H. Mfg. Co.	157		
				Pratt Specialty Co.	53	Smith, Geo. H. Steel Cast-Ing Co.	42		
				Pratt Chuck Co.	76	Smith, M.L.	10		
				Pratt & Whitney Co.	78	Smith, M.W. Co.	115		
				Prentiss, Geo. W. & Co.	167	Smith, Wm. J. Co.	77		
				Prentiss Tool & Supply Co.	116	Smooth-On Mfg Co.	47		
				Prentiss Viso Co.	148	Smythe, S.R. Co.	41		
				Pressed Steel Mfg Co.	92	Snell Mfg. Co.	137		
				Pressed Steel Tank Co.	10	Snyder, W.F. & Co.	28		
				Primdore, Henry E.	45	Sommer's Son, John	186		
				Praser & Son, Thomas	29	Souther, Henry, Engineering Co.	2		
				Pugh, Job T.	185	Southern Iron & Equipment Co.	113		
				Putnam, C.C. & Son	163	South Fork Ferry & Mch. Co.	54		
						Spaeke, F. W. Mch. Co.	65		
						Speck, I.G. & Co. Ltd.	14		
						Speiser's, I. S. Sons	43		
						Spencer Wire Co.	168		
						Springfield Facln. Co.	46		
						Springfield D Mfg. Co.	69		
						Springfield Tire & Rubber Co.	71		
						Standard Engineering Co.	140&181		
						Standard Horse Nail Co.	169		
						Standard Horse Shoe Co.	169		
						Standard Nipple Mfg. Co.	146		
						Standard Roller Bearing Co.	84		
						Standard Scale & Supply Co.	68		
						Standard Tin Plate Co.	22		
						Standard Tool & Die Co.	74		
						Standard Welding Co.	51		
						Stanley Rule & Level Co.	139		
						Stanley Works.	161		
						Star Expansion Bolt Co.	154		
						Starratt, L. S. Co.	130		
						Stearns, W. H. Stamping Co.	8		
						Stein, J. E. Co.	51		
						Sterling Blower & Pmp. Mfg. Co.	61		
						Sterling Emery Wheel Mfg. Co.	71		
						Stevens, Chas. G. Co.	24		
						Stevens, Chas. L. & Co.	58		
						Stewart & Farnham Mfg. Co.	162		
						Stewart & Farnham Mfg. Co.	162		
						Stewart Iron Works Co.	164		
						Stiles, H. A. & Co.	69		
						Stimpson, E. B. Co.	8		
						Stockbridge Machine Co.	91		
						Stocker, H. A. Machinery Co.	108		
						Storker, E. B. Mfg. Co.	85		
						Stroever, J. B. Co.	85		
						Stokes, R. B. Mfg. Co.	151		
						Storm Mfg. Co.	146		
						Stow Flexible Shaft Co.	65		
						Stow Mfg. Co.	82		
						Stowell Mfg. Co.	172		
						Strebly & Co. Co.	48		
						Sturges & Person	10		
						Sturges & Burn Mfg. Co.	10		
						Sturtevant, B. F. Co.	104		
						Sundbergs, Kropf & Co.	48		
						Superior Charcoal Iron Co.	29		
						Superior Steel Co.	27		
						Supplies Hardware Co.	134		
						Swan, James Casting Co.	137		
						Swan, James Co.	137		
						Swedish Iron & Steel Corp.	54		
						Swindell, W. & Bros.	41		
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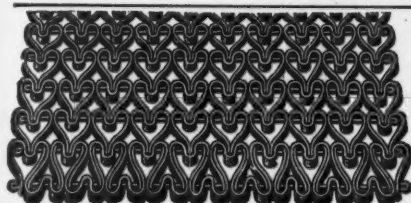


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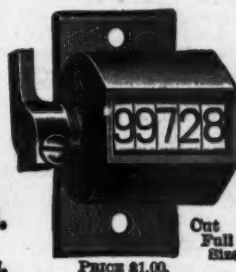
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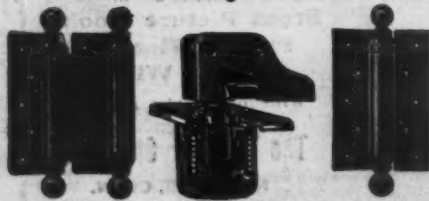
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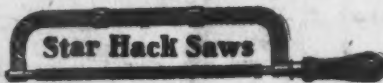


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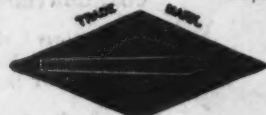
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